June 1976 Number 382-Part I

Solar-Geophysical Data prompt reports

Data for May 1976 – April 1976

Explanation of Data Reports Issued as Number 378 (Supplement) February 1976

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Solar - Geophysical Data

NO. 382 JUNE 1976

Part I (Prompt Reports)

DATA FOR
MAY 1976
APRIL 1976

NATIONAL GEOPHYSICAL AND SOLAR - TERRESTRIAL DATA CENTER
BOULDER, COLORADO

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To standardize referencing these reports in the open literature, the following format is recommended:

Solar-Geophysical Data, 366 Part I (or Part II), pages, February 1975, U.S. Department of Commerce, (Boulder, Colorado, U.S.A. 80302)

SOLAR - GEOPHYSICAL DATA

No. 382

Issued in two parts

Hope I. Leighton, Editor

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Solar - Terrestrial Data Services Division

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Note: A = Part I, B = Part II.

374A 28 listed under 1975 Aug shows that data for August 1975 were contained in *Solar-Geophysical Data* Number 374 - Part I beginning on page 28.

MAY 1976 DATA

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ALERT PERIODS

INTERNATIONAL URSIGRAM
AND WORLD DAYS SERVICE

MAY 1976

PRESTO MESSAGES (THE RAPID REPORT OF MAJOR EVENTS)

BOULDER 30/2225Z APRIL, COSMIC RAY INCREASE 30/2222Z 05-06 PERCENT
BOULDER 30/2151Z APRIL, SOFLARE 2B S09W46 30/2050Z IN PROGRESS
BOULDER 30/2054Z APRIL, TENFLARE 1750 FLUX UNITS 30/2054Z IN PROGRESS
BOULDER 03/0030Z MAGSTORM BEGINS GRADUALLY 02/1200Z, K = 6 AT 02/2300Z, K = 7 AT 03/0030Z
KAKIOKA 03/0100Z MAGSTORM BEGINS 02/1828Z

SUMMARY OF THE GEOALERT WWA MESSAGES

Message serial number	Date of issue	Date of observation	Wolf number	10 cm solar flux	A index	Active Regions				Outstanding events	Forecasts			Alert Situatuations
						Location Lat-Long	No. of Flares Total	M	X		Date	Location Lat-Long	Desc[a]	
122	1	30	70	80	11	S09W46 N05W01	8 0	0 0	1 0	2B FLARE S09W46, 30/2050Z FLARE WAS TENFLARE 1750 FLUX UNITS. COSMIC RAY INCREASE 05-06 %	1	S09W46 N05W01	A Q	SOLALERT 01/03 MAGALERT 01/04
123	2	01	48	76	08	S09W59	3	0	0		2	S09W59	E	SOLALERT 02/03 MAGALERT 02/04
124	3	02	32	73	22	S09W70	0	0	0	A MAGSTORM STARTED GRADUALLY 02/1200Z K = 6 at 2300Z, K = 7 at 03/0030Z	3	S09W70	E	SOLALERT 03/04 MAGALERT 03/04
125	4	03	25	71	58	S09W87 N09E23	0 0	0 0	0 0	MAGNETIC STORM CONTINUES BUT INTENSITY HAS DECREASED	4	S09W87 N09E23	Q Q	SOLNIL MAGALERT 04/06 MINOR
126	5	04	17	70	20	N09E09	0	0	0	MAGNETIC STORM HAS DECREASED TO UNSETTLED TO SPORADIC ACTIVE CONDITIONS	5	N09E09	Q	SOLQUIET MAGNIL
127	6	05	27	70	10	N09W05 N01E75	0 0	1 0	0 0		6	N09W05 N01E75	Q Q	SOLQUIET MAGQUIET
128	7	06	12	69	12	N03E63	0	0	0		7	N03E63	Q	SOLQUIET MAGQUIET
129	8	07	12	69	08	N01E50	0	0	0		8	N01E50	Q	SOLQUIET MAGQUIET
130	9	08	11	69	11	N01E37	0	0	0		9	N01E37	Q	SOLQUIET MAGQUIET
131	10	09	12	69	05	N01E23	0	0	0		10	N01E23	Q	SOLQUIET MAGQUIET
132	11	10	24	71	05	N01E08 N07E16	0 0	0 0	0 0		11	N01E08 N07E16	Q Q	SOLQUIET MAGQUIET
133	12	11	23	71	10	N01W02 N08E70	0 0	0 0	0 0		12	N01W02 N08E70	Q Q	SOLQUIET MAGQUIET
134	13	12	23	71	08	N01W16 N07E56	0 0	0 0	0 0		13	N01W16 N01E56	Q Q	SOLQUIET MAGQUIET
135	14	13	34	72	04	N01W28 N07E40 N09E74	0 0 0	0 0 0	0 0 0		14	N01W28 N07E40 N09E74	Q Q Q	SOLQUIET MAGQUIET
136	15	14	46	73	04	N00W43 N07E26 S09E59 N10E04	1 0 0 0	0 0 0 0	0 0 0 0		15	N00W43 N07E26 S09E59 N01E04	Q Q Q Q	SOLQUIET MAGQUIET
137	16	15	50	75	03	N00W57 N06E16 S10E45 S03W58	1 0 0 0	0 0 0 0	0 0 0 0		16	N00W57 N06E16 S10E45 S03W58	Q Q Q Q	SOLQUIET MAGQUIET
138	17	16	37	77	04	N00W70 N09E00 S03W70	0 0 0	0 0 0	0 0 0		17	N00W70 N09E00 S03W70	Q Q Q	SOLQUIET MAGQUIET
139	18	17	23	75	04	N00W82 S14E25	0 0	0 0	0 0		18	N00W82 S14E25	Q Q	SOLQUIET MAGALERT MINOR 19XX
140	19	18	26	75	02	S07E06 S07E63	0 2	0 0	0 0		19	S07E06 S07E63	Q Q	SOLQUIET MAGNIL
141	20	19	22	72	08	S07E48 S08E64	0 0	0 0	0 0		20	S07E48 S08E64	Q Q	SOLQUIET MAGQUIET
142	21	20	23	71	14	S07E33 S08E49	0 0	0 0	0 0		21	S07E33 S07E49	Q Q	SOLQUIET MAGALERT
143	22	21	22	72	10	S07E20 S08E36	0 0	0 0	0 0		22	S07E20 S08E36	Q Q	SOLQUIET MAGNIL
144	23	22	12	71	10	S09E23	0	0	0		23	S09E23	Q	SOLQUIET MAGQUIET
145	24	23	24	70	10	S08W06 S08E09	1 0	0 0	0 0		24	S08W06 S08E09	Q Q	SOLQUIET MAGQUIET

ALERT PERIODS

INTERNATIONAL URSIGRAM
AND WORLD DAYS SERVICE

MAY 1976

SUMMARY OF THE GEOALERT WWA MESSAGES

Message serial number	Date of issue	Date of observation	Wolf number	10 cm solar flux	A index	Active Regions				Outstanding events	Forecasts			Alert Situatuations
						Location	No. of Flares				Date	Location	Desc[a]	
						Lat-Long	Total	M	X			Lat-Long		
146	25	24	11	69	08	S08W19	0	0	0		25	S08W19	Q	SOLQUIET MAGQUIET
147	26	25	00	68	10	-	-	-	-		26	SPOTNIL		SOLQUIET MAGQUIET
148	27	26	14	68	08	S08W26	0	0	0		27	S08W26	Q	SOLQUIET MAGQUIET
149	28	27	00	68	06	-	-	-	-		28	SPOTNIL		SOLQUIET MAGQUIET
150	29	28	00	67	18	-	-	-	-		29	SPOTNIL		SOLQUIET MAGALERT MINOR 29/31
151	30	29	00	66	17	-	-	-	-		30	SPOTNIL		SOLQUIET MAGALERT MINOR 30/01
152	31	30	00	66	16	-	-	-	-		31	SPOTNIL		SOLQUIET MAGALERT MINOR 31/01
153	1	31	00	66	09	-	-	-	-		1	SPOTNIL		SOLQUIET MAGALERT MINOR 31/01

Note: For clarification the Errata published in May 1976 is restated: The "stratwarms" published in March 1976 (379 - Part I) with the Alert Periods for February 1976 were listed on the wrong days. They must all be advanced one day. Thus, the one listed on the 9th was issued on the 10th, the one shown on the 10th should appear on the 11th, etc.

RELATIVE SUNSPOT NUMBERS

ZURICH, R_Z

	1975 FINAL							1976 PROVISIONAL				
DAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY
1	7	23	37	14	15	0	7	0	0	0	26	35
2	11	18	36	16	8	0	23	0	0	0	25	26
3	8	22	46	19	9	7	20	0	0	0	22	25
4	7	16	73	29	10	18	23	0	0	0	13	8
5	7	23	93	25	8	22	21	0	0	0	12	22
6	7	33	104	24	10	27	18	0	0	10	9	10
7	0	23	102	24	9	30	20	0	0	12	0	10
8	0	19	99	23	16	33	18	0	0	7	0	9
9	0	16	83	17	15	30	8	0	0	10	8	8
10	0	23	80	10	8	26	0	0	0	12	10	10
11	9	29	72	10	8	30	0	0	0	13	15	16
12	0	33	45	16	10	24	0	20	0	13	17	17
13	0	43	52	19	21	22	0	26	13	13	17	23
14	0	46	34	17	26	29	7	36	16	22	19	30
15	9	43	31	8	21	28	7	20	18	16	13	17
16	19	39	26	14	18	28	7	22	11	11	19	12
17	17	25	19	14	16	30	9	24	8	30	24	18
18	12	32	16	18	16	33	8	20	15	45	27	9
19	15	36	9	13	15	36	7	18	10	51	27	20
20	0	28	22	30	10	35	0	16	12	51	30	20
21	7	30	23	27	7	31	0	11	8	48	39	14
22	0	27	7	23	0	23	0	10	7	36	20	7
23	12	19	14	0	0	12	0	10	0	28	17	15
24	20	30	9	0	7	11	18	0	7	25	16	8
25	24	33	11	0	0	9	14	0	0	22	17	0
26	33	30	16	0	0	7	9	0	0	42	23	7
27	38	29	18	0	0	0	0	7	7	46	23	0
28	36	26	10	0	0	0	0	0	0	50	21	0
29	23	20	10	0	0	0	0	14	0	42	25	0
30	22	27	21	7	0	0	0	8		32	38	0
31		34	21		0		0	0		27		0
MEAN	11.4	28.2	39.7	13.9	9.1	19.4	7.8	8.5	4.6	23.0	19.5	12.7

1975 yearly mean = 15.5

DAILY SOLAR FLUX AT 2800 MHz
OTTAWA ARO

FLUX ADJUSTED TO 1 A.U., S_a

	1975							1976				
DAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY
1	71.4	73.7	91.6	87.0	76.4	70.4	72.1	72.1	68.6	67.7	73.6	77.6
2	73.0	75.8	95.4	87.9	78.1	71.4	74.8	71.2	68.6	68.1	75.8	74.2
3	70.8	77.1*	97.0*	87.8	75.4	73.0	74.3	71.3	68.4	67.4	76.1	71.9
4	70.4	76.6	104.6	92.8	76.3	75.4	74.1	71.8	68.4	67.4	74.7	71.5
5	69.3	76.8	107.9	94.4	76.1	78.9	77.4	71.9	67.6	67.6	73.0	71.1
6	68.2	75.1	120.0*	94.0	75.1	80.1	75.8	71.7	68.1	67.5	71.3	69.9
7	68.1	74.1	123.2	91.1	74.3	80.5	73.7	71.6	69.3	67.9	70.3	70.3
8	67.5	74.6	123.7	88.5	74.0	80.3	76.0	70.9	68.4	67.9	71.9	70.2
9	67.7	73.3	115.9	84.3	75.4	79.8	73.3	69.4	68.3	68.2	74.1	70.6
10	68.8	73.0	116.5	82.5	74.3	78.9	73.3	70.5	68.5	68.4	75.3	71.7
11	68.1	77.6	107.3	81.1	73.3	73.6	74.3	72.1	68.4	68.8	77.1	72.5
12	68.4	82.7	104.5*	78.2*	74.8	79.9	73.4	76.3	67.8	68.9	73.1	72.6
13	67.9	88.5*	98.0	75.2	79.0	79.2	72.8	80.0	69.7	70.9	79.6	73.6
14	68.5	89.0	90.9*	74.2	80.0	82.7	71.8	82.1*	69.9	70.1	79.5	74.2
15	68.9	85.6	86.0	74.1	80.3	83.7	71.8	80.4	69.6	69.1	79.2	76.9
16	71.4	83.6	82.6	74.3	78.5	87.6	70.9	78.1	69.7	72.5	80.6	79.2
17	70.2	81.2	79.0	74.8	78.9	86.9	70.5	76.6	69.9	74.4*	80.5	76.5
18	70.2	82.8	76.4	76.2	79.2	90.8*	69.6	76.7	70.1	79.0	80.5	75.6*
19	71.0	81.9	76.7	76.2	78.0	93.0*	69.1	75.2	70.1	81.6*	79.9	73.8
20	72.5	83.3	77.2	76.5	77.1	90.9	69.7	74.6	70.0	85.0	80.0	73.0
21	68.7	83.1	80.0	76.7	75.7	86.6	69.0	72.1	68.8	91.2	78.0	74.0
22	69.9	82.7	78.5	75.3	74.2	81.5	68.9	70.9	68.9	83.0	76.2*	72.5
23	72.9	82.0	76.8	76.1	74.3	77.2	69.6	70.2	69.2	86.9	75.7	71.9
24	75.9	79.3	77.0	76.8	72.7*	74.7	71.4	68.5	69.6	82.2*	76.8	70.8
25	77.7	79.8	80.6	76.7	72.1	73.7	71.0	68.2	68.4	85.1	75.7	69.8
26	79.8	80.0	81.3	76.7	71.9	71.9	71.8	68.2	68.5	84.1*	75.7	69.5
27	81.5	78.5	83.6	75.7	72.1	70.7	72.5	67.2	68.5	85.5	74.6	69.6
28	80.7	76.5	83.3	76.1	71.7	70.4	71.5	67.1	67.9	87.1*	73.4	69.0
29	79.4	75.5	84.7	75.9	70.8	70.9	72.5	67.4	67.4	84.0	79.6	68.0
30	78.8	76.9	86.2	75.8	70.2	70.6	71.9	68.9		82.4	79.5*	68.1
31		81.9*	86.7		69.9		72.1	69.1		82.7		68.7
MEAN	71.9	79.7	92.7	80.4	75.3	79.1	72.3	72.4	68.8	75.8	76.7	72.2

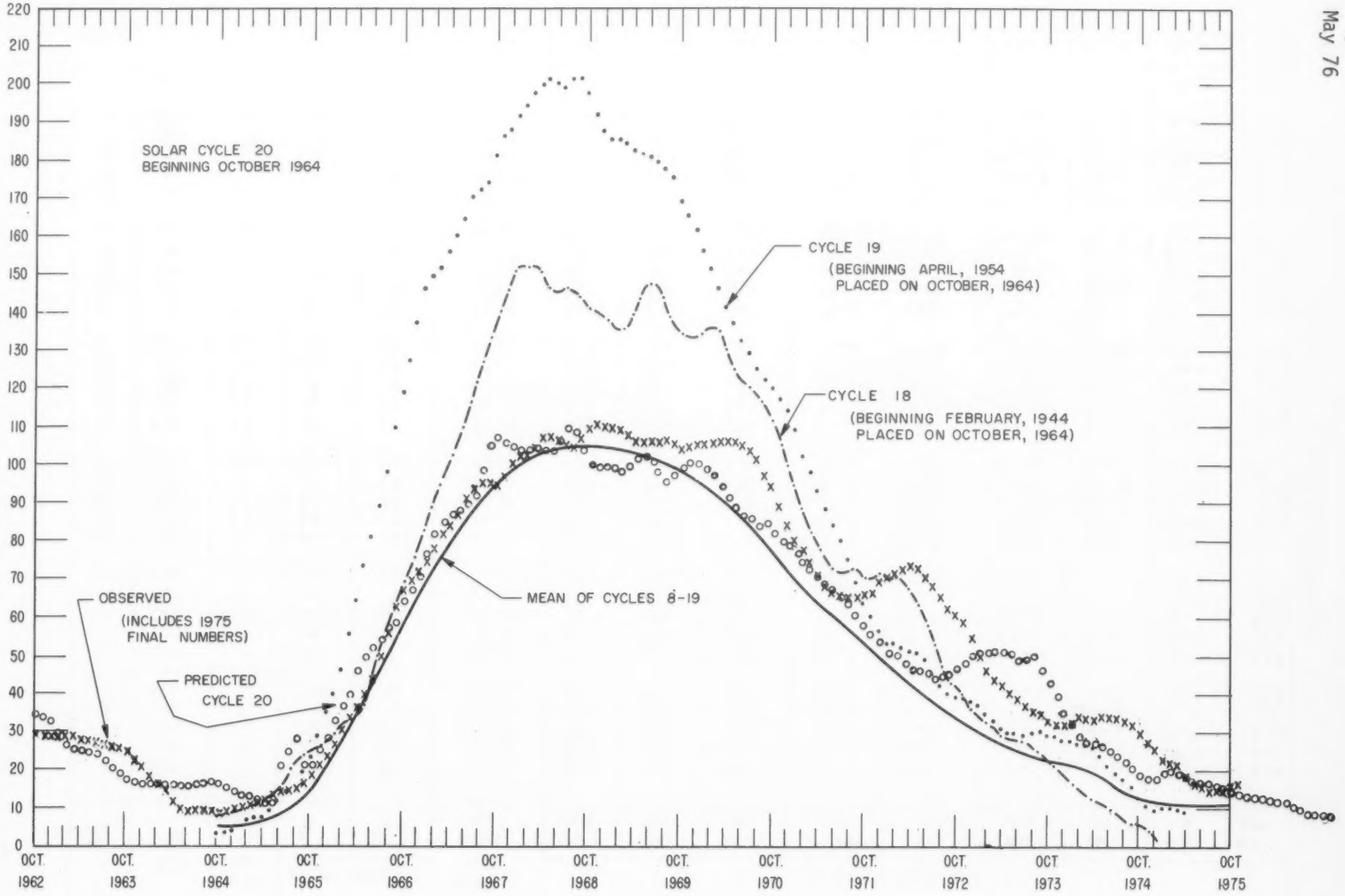
* adjusted for burst

DAILY SOLAR INDICES

MAY 1976

MAY 1976	YEAR DAY	BARTELS 27-DAY CYCLE NUMBER	SUNSPOT NUMBERS		OBSERVED FLUX	SOLAR FLUX ADJUSTED TO 1 A.U.								
			R_Z	$R_{A'}$	OTTAWA 2800	AFGL 15400	AFGL 8800	AFGL 4995	OTTAWA 2800	AFGL 2695	AFGL 1415	AFGL 606	AFGL 410	AFGL 245
1	122	2	35	30	76.4	513	277	127	77.6	75.9	47.5	32.6	21.3	8.4
2	123	3	26	25	73.0	513	266	119	74.2	71.9	46.5	30.6	19.3	8.2
3	124	4	25	23	70.7	516	274	118	71.9	70.6	45.5	31.0	21.5	7.6
4	125	5	8	4	70.3	511	279	116	71.5	71.8	45.5	33.9	19.3	8.0
5	126	6	22	8	69.8	517	271	116	71.1	70.0	45.8	30.0	20.4	8.1
6	127	7	10	7	68.7	510	269	117	69.9	69.3	45.0	30.7	19.9	8.3
7	128	8	10	8	69.0	513	275	115	70.3	70.8	46.2	35.2	20.5	9.8
8	129	9	9	10	68.9	516	278	116	70.2	70.5	44.9		21.7	9.0
9	130	10	8	9	69.3	514	276	115	70.6	69.5	47.5		20.5	8.2
10	131	11	10	10	70.3	516	273	117	71.7	69.6	44.5		22.9	9.0
11	132	12	16	20	71.1	514	276	117	72.5	70.6	45.7	37.4	21.8	8.4
12	133	13	17	21	71.1	528	263	116	72.6	70.8	46.3	33.1	20.0	8.7
13	134	14	23	20	72.1	517	275	117	73.6	71.5	47.0	28.3	22.9	9.1
14	135	15	30	27	72.6	515	270	114	74.2	71.5	48.5	37.0	22.0	8.7
15	136	16	17	15	75.2	523	275	118	76.9	73.5	49.6	37.7	17.3	7.7
16	137	17	12	15	77.4	516	274	122	79.2	76.0	51.4	34.0	21.2	8.6
17	138	18	18	20	74.8	524	275	119	76.5	74.2	50.4	37.4	22.5	8.8
18	139	19	8	8	73.8*	523	274	121	75.6*	74.4	50.3	37.2	22.5	9.0
19	140	20	20	16	72.1	525	264	116	73.8	71.3	48.9	35.5	21.4	8.5
20	141	21	20	17	71.3	514	266	116	73.0	71.8	48.2	36.5	22.2	8.5
21	142	22	14	10	72.2	518	272	116	74.0	72.9	49.8	37.7	25.8	9.1
22	143	23	7	8	70.7	516	271	115	72.5	70.1	47.1	36.8	22.9	8.9
23	144	24	15	8	70.1	520	276	114	71.9	69.8	45.5	34.0	20.5	8.6
24	145	25	8	7	69.0	511	274	114	70.8	68.5	44.1	33.9	22.8	8.8
25	146	26	0	0	68.0	512	273	113	69.8	68.5	44.3	36.0	22.5	9.1
26	147	27	7	2	67.7	513	270	112	69.5	68.4	43.3	34.4	22.9	9.8
27	148	1	0	0	67.8	505	272	112	69.6	68.1	42.9	33.5	22.9	8.7
28	149	2	0	0	67.2	503	263	112	69.0	66.6	41.5	31.9	19.0	8.4
29	150	3	0	0	66.1	506	269	111	68.0	65.3	40.2	34.6	22.6	8.7
30	151	4	0	0	66.2	518	269	113	68.1	66.2	41.2	35.1	24.5	8.8
31	157	5	0	0	66.8	522	269	113	68.7	65.8			22.4	8.4
MEAN			12.7	11.2	70.6	516	272	116	72.2	70.5	46.2	34.3	21.6	8.6

* Adjusted for burst.



PREDICTED AND OBSERVED SUNSPOT NUMBERS

SMOOTHED OBSERVED AND PREDICTED SUNSPOT NUMBERS
CYCLE 20

MONTH	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.6	10.2	11.0
1965	11.7	12.0	12.5	13.6	14.6	15.0	15.5	16.4	17.4	19.7	22.3	24.5
1966	27.7	31.3	34.5	37.4	40.4	44.6	50.3	56.6	63.1	67.6	70.2	72.7
1967	75.0	78.8	82.2	84.6	87.4	91.3	94.1	95.3	95.3	95.0	97.1	100.6
1968	102.6	102.9	104.7	107.2	107.6	106.6	105.2	104.8	107.0	109.9	110.6	110.1
1969	110.0	109.6	108.0	106.4	106.2	106.1	105.8	106.4	105.4	104.1	104.6	104.9
1970	105.6	106.0	106.2	106.1	105.8	105.3	103.8	101.0	97.2	93.9	89.4	84.1
1971	80.4	77.8	74.4	70.9	68.1	66.7	65.4	64.6	65.8	66.2	66.0	69.4
1972	70.8	71.2	72.4	73.4	72.9	70.5	68.2	65.5	62.2	60.6	58.7	55.1
1973	50.9	46.5	44.2	42.7	40.7	39.1	37.5	36.1	34.4	32.6	31.0	31.5
1974	32.7	34.4	34.0	33.9	34.6	34.5	34.0	33.1	32.1	30.3	27.6	25.2
1975	23.9	22.2	21.3	18.6	16.9	16.0	15.0	14.3	14.5	15.6	16.3	15.3
												(--)
1976	14.2	13.0	12.0	11.0	10.2	9.4	8.7	8.4	8.2	8.0	7.9	7.7
	(--)	(--)	(--)	(--)	(--)	(--)	(--)	(--)	(--)	(--)	(--)	(--)

For each month, the upper figure is the observed or predicted Zürich smoothed sunspot number. The lower figure in parenthesis is the corresponding absolute value of the 90% prediction interval, an indication of the uncertainty above and below the predicted number. Observed numbers are those with no prediction intervals. The observed smoothed sunspot numbers are based on final Zürich numbers through 1975.

The predicted sunspot numbers are derived from a regression analysis based on cycles 8 through 19. Tests indicate that earlier cycles are from a different statistical population. From July 1968 - February 1970 a regression analysis based on cycles 1 through 19 was used because it had not then been proven that two populations exist.

Hα SOLAR FLARES

MAY 1976

OBSERV-ATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS			REMARKS
	DATE MAY	START	MAX. PHASE	END	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	MIN.		COND.	TYPE	TIME UT	MEAS. AREA millionths of disk	CORR. AREA Sq. Deg.	
PALE	01	2042		2057D	S 9	W60	.864		27.4	15D	SF	3	C		54		
PALE	01	2142E	2154U	2235	S 9	W60	.864		27.4	53D	SF	3	C		90		U
MANI	01	2155E	2155U	2210	S08	W61	.872		27.3	15D	SN	2	V	2155	90	1.7	FU
MCMA	05	1113E		1245	N03	W67	.923	14185	30.4	92D	SN		C	1114	30	.9	DH
ATHN	13	1401	1403	1408	S10	E73	.955		19.1	7	SF	3	C		19		DE
MANI	15	0314	0315	0322D	S03	W45	.706		11.8	8D	SF	3	P	0315	30	.4	
RAMY	15	1037E	1040U	1108	S15	E60	.869		19.9	31D	SF	4	C		72		FDE
RAMY	15	1037E	1040U	1100D	S14	E60	.868		19.9	23D	SF	4	V		96		DE
RAMY	16	1444E	1446U	1520D	S 3	W65	.906		11.7	36D	SF	4	V		48		FDE
RAMY	16	1444	1501	1517	S 4	W65	.906		11.7	33	SF	4	C		54		FDE
ATHN	18	1348E	1351U	1407	S 6	E67	.920		23.6	19D	SF	3	C		4		F
RAMY	18	1354	1400	1406	S 4	E66	.913		23.5	12	SF	4	C		149		F
CATA	18	1355	1400	1405	S07	E66	.913	14215	23.5	10	1B	2		1400	140		
ATHN	18	1623	1627	1638	S 8	E68	.926		23.8	15	SF	2	C		48		F
RAMY	18	1625	1644	1716	S 8	E70	.939		23.9	51	SF	3	C		123		DE
MCMA	18	2041E		2048D	S06	E64	.898	14215	23.7	7D	SN		P	2045	30	.7	E
ATHN	19	1337	1340	1346	N 7	W31	.534		17.2	9	SF	3	C		48		F
CATA	19	1340	1340	1355	N08	W31	.538		17.2	15	SN	2		1340	56	.7	
MCMA	21	1220	1247	1510	S14	W25	.461	14211	19.6	170	SF		C	1247	100	1.2	E
RAMY	21	1225	1243	1324	S12	W28	.492		19.4	59	SF	4	C		135		FDE
RAMY	21	1252	1255	1307	S20	E13	.375		22.5	15	SF	4	C		36		DE
RAMY	21	1253E	1255U	1330D	S12	W28	.492		19.4	37D	SF	4	V		159		FDE
RAMY	21	1255E	1258U	1315D	S21	E11	.372		22.4	20D	SF	4	V		47		DE
MCMA	21	2134		2138D	S10	E40	.650	14215	24.9	4D	SF		C	2135	40	.6	E
CATA	22	1455	1455	1455	S09	E14	.270		23.7		SN	1		1455	56	.6	
RAMY	23	1137	1146	1208	S 8	E 5	.139		23.9	31	SF	4	C		114		FDE
MCMA	23	1138	1145	1210	S09	E05	.153	14215	23.9	32	SF		C	1145	60	.6	EL
RAMY	23	1142E	1146	1204D	S 9	E 6	.163		23.9	22D	SF	4	V		96		FDE
CATA	23	1145	1215	1255	S09	E05	.153	14215	23.9	70	1N	2		1215	196	2.0	
UPIC	26	0906E		0950U	S11	W90	1.000		19.6	44U	SN		P	0906			A

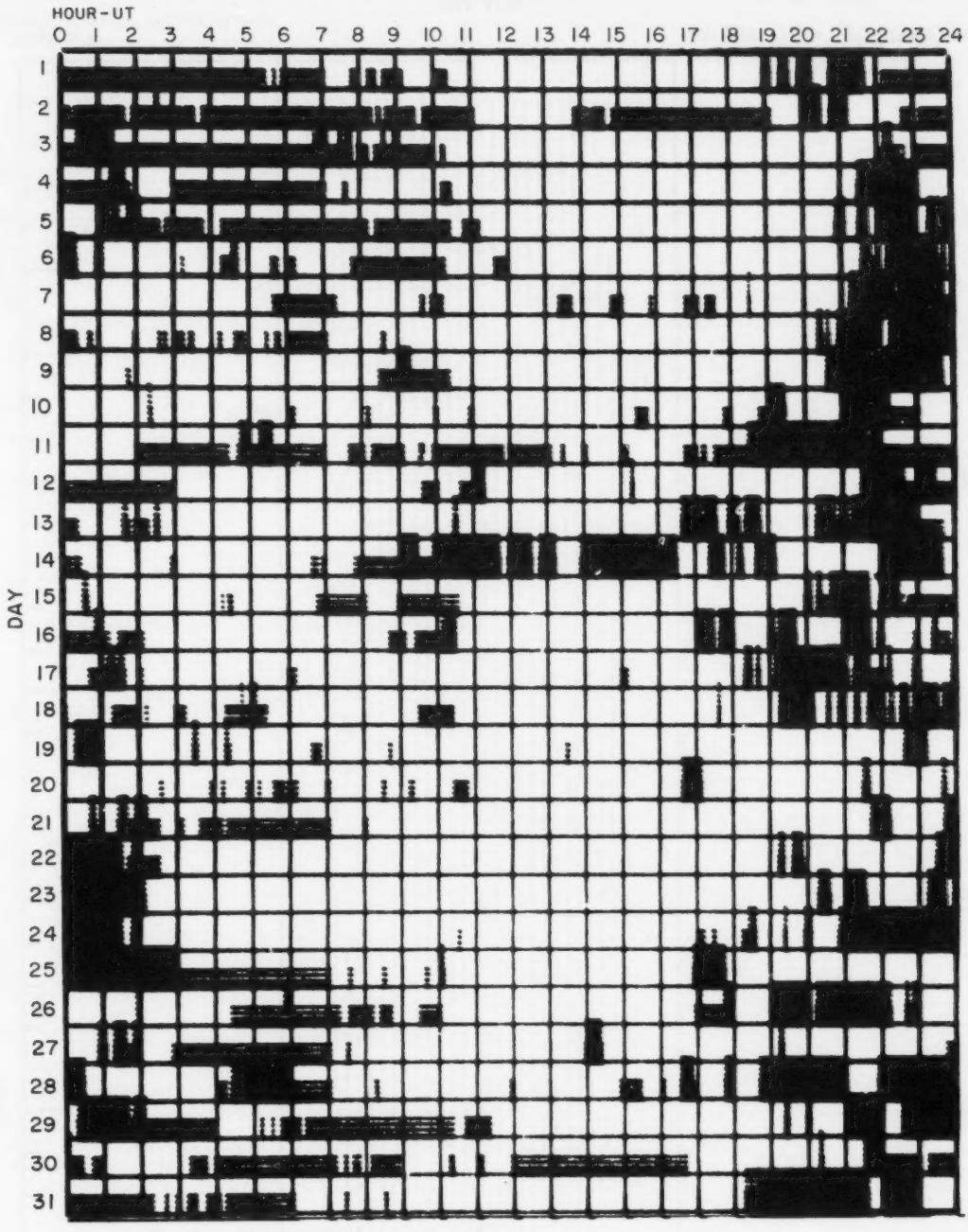
"Remarks":

A = Eruptive prominence whose base is less than 90° from central meridian.
B = Probably the end of a more important flare.
C = Invisible 10 minutes before.
D = Brilliant point.
E = Two or more brilliant points.
F = Several eruptive centers.
G = No visible spots in the neighborhood.
H = Flare accompanied by a high speed dark filament.
I = Active region very extended.
J = Distinct variations of plage intensity before or after the flare.
K = Several intensity maxima.
L = Existing filaments show signs of sudden activity.
M = White-light flare.
N = Continuous spectrum shows effects of polarization.
O = Observations have been made in the calcium II lines H and K.
P = Flare shows helium D_3 in emission.
Q = Flare shows the Balmer continuum in emission.
R = Marked asymmetry in Hα line suggests ejection of high velocity material.
S = Brightness follows disappearance of filament (same position).
T = Region active all day.
U = Two bright branches, parallel (||) or converging (Y).
V = Occurrence of an explosive phase: important and abrupt expansion in about a minute with or without important intensity increase.
W = Great increase in area after time of maximum intensity.
X = Unusually wide Hα line.
Y = System of loop-type prominences.
Z = Major sunspot umbra covered by flare.

INTERVALS OF NO FLARE PATROL OBSERVATION

FOR PRECEDING SOLAR FLARE TABLE

MAY 1976



Observatories included in total patrol:

Arcetri	Catania	Istanboul	McMath-Hulbert	Ramey
Athenes	Herstmonceux	Kodaikanal	Mitaka	Tehran
Bucharest	Hurbanovo	Manila	Palehua	Upice
				Wendelstein

Times of no flare patrol are shown by the shaded area for each day divided into times of no cinematographic patrol (bottom half of day) and times of neither visual nor cinematographic patrol (top half of day).

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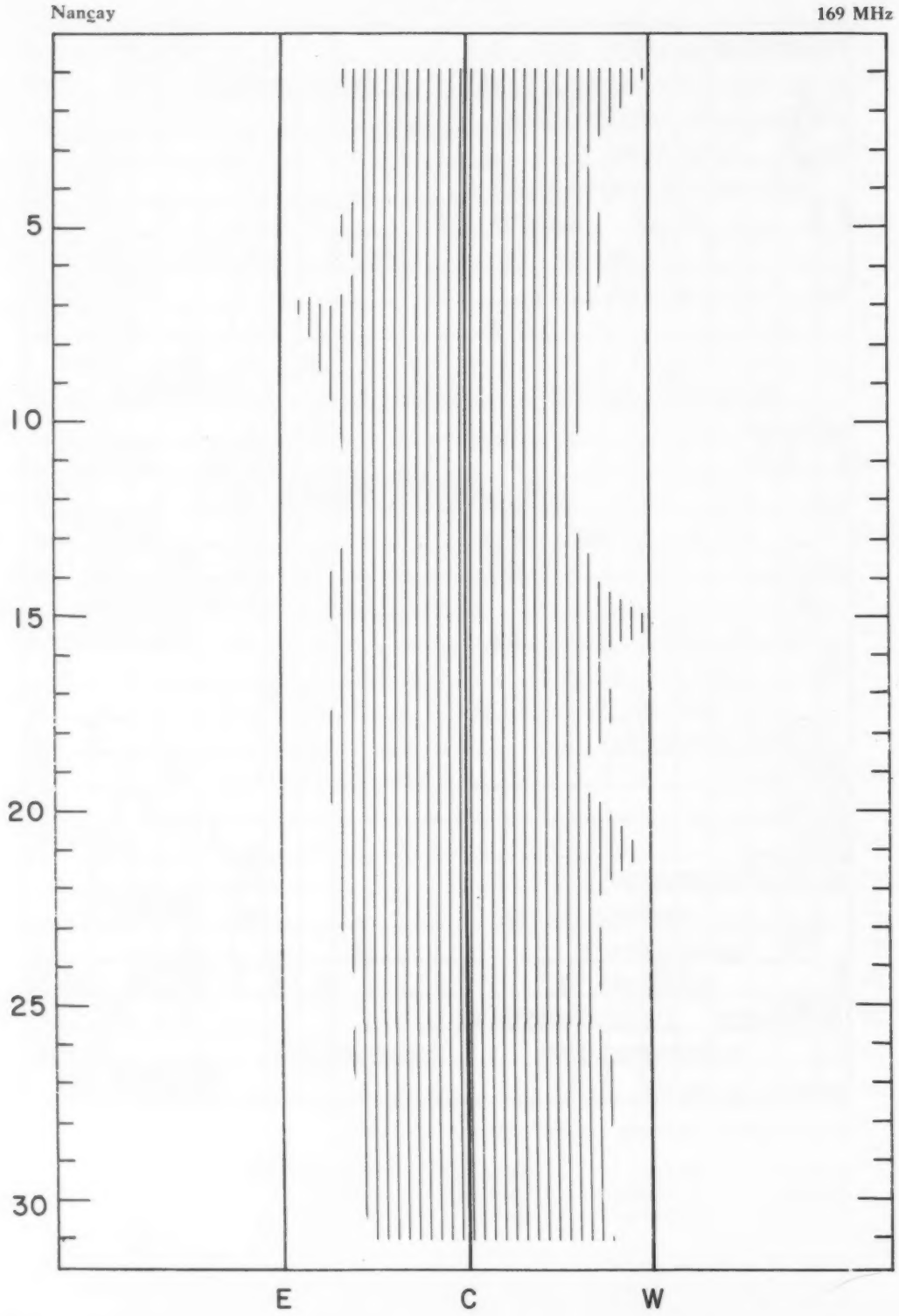
May 76

SOLAR RADIO EMISSION
INTERFEROMETRIC OBSERVATION

MAY 1976

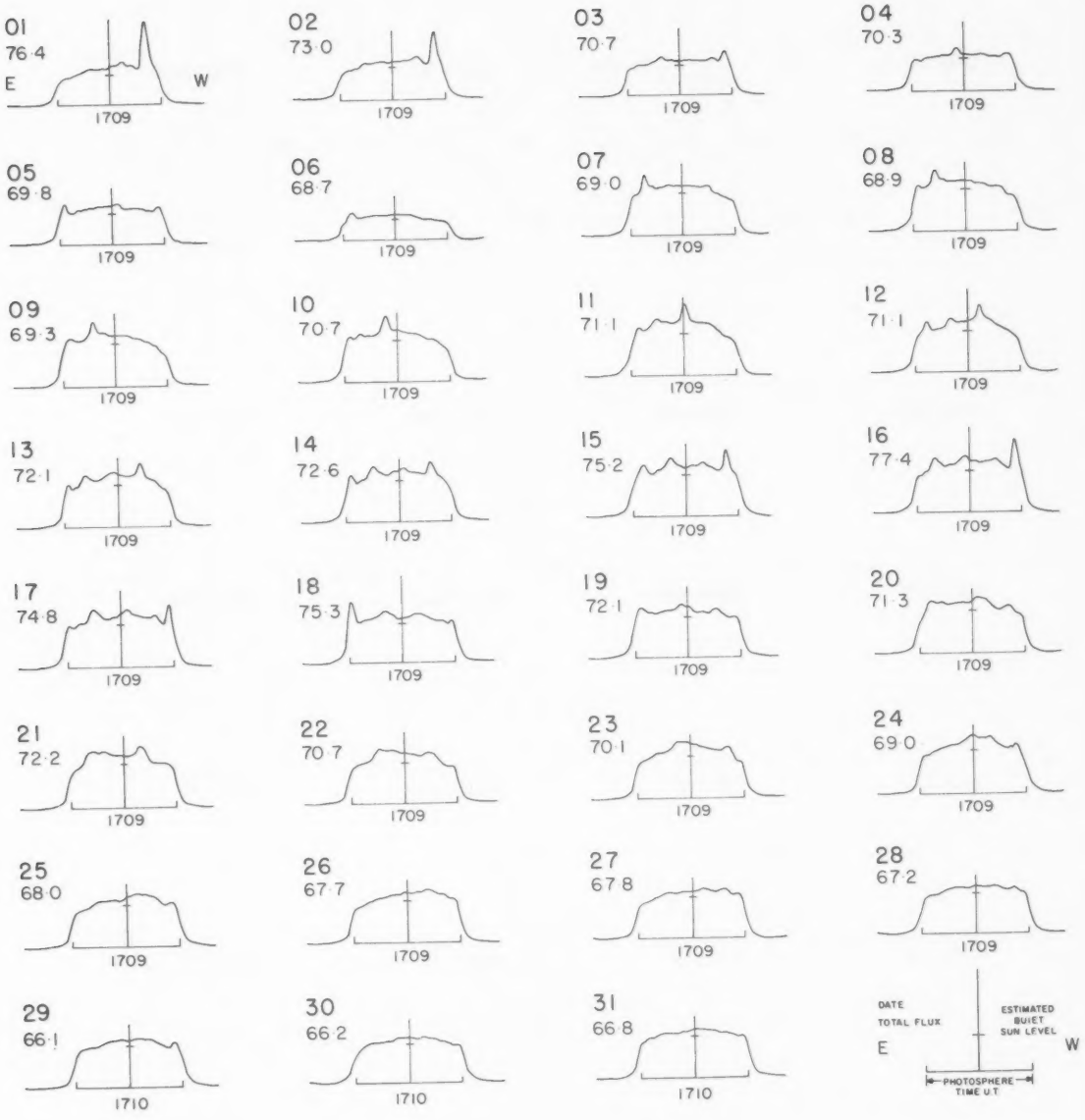


EAST-WEST SOLAR SCANS

MAY , 1976

ALGONQUIN RADIO OBSERVATORY
CANADA

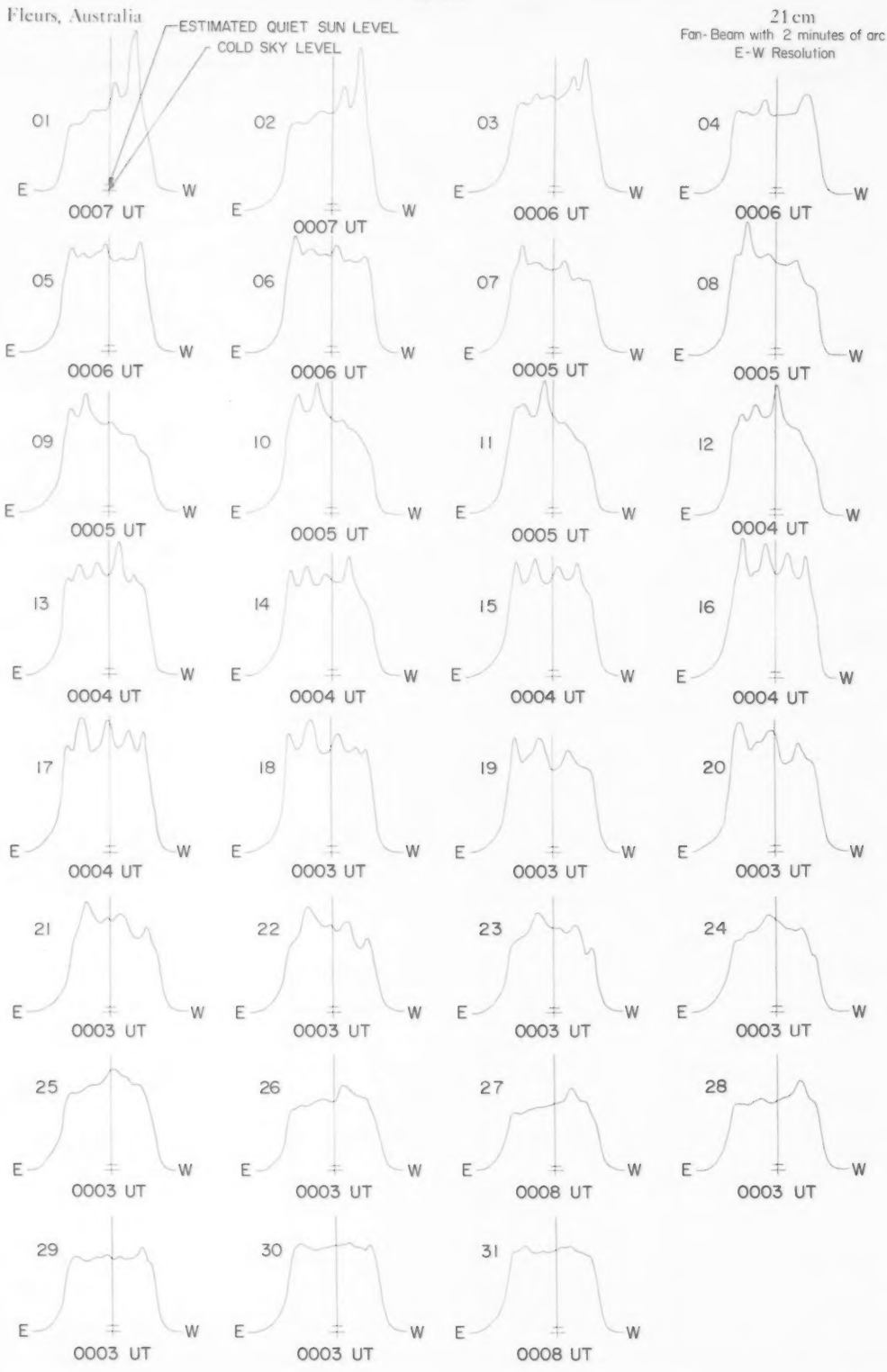
10.7cm
Fan Beam with 1.5 minutes of arc
E-W Resolution



14
May 76

EAST-WEST SOLAR SCANS

MAY 1976


Fleurs, Australia
ESTIMATED QUIET SUN LEVEL
COLD SKY LEVEL
21 cm
Fan-Beam with 2 minutes of arc
E-W Resolution
01 E W 0007 UT
02 E W 0007 UT
03 E W 0006 UT
04 E W 0006 UT
05 E W 0006 UT
06 E W 0006 UT
07 E W 0005 UT
08 E W 0005 UT
09 E W 0005 UT
10 E W 0005 UT
11 E W 0005 UT
12 E W 0004 UT
13 E W 0004 UT
14 E W 0004 UT
15 E W 0004 UT
16 E W 0004 UT
17 E W 0004 UT
18 E W 0003 UT
19 E W 0003 UT
20 E W 0003 UT
21 E W 0003 UT
22 E W 0003 UT
23 E W 0003 UT
24 E W 0003 UT
25 E W 0003 UT
26 E W 0003 UT
27 E W 0008 UT
28 E W 0003 UT
29 E W 0003 UT
30 E W 0003 UT
31 E W 0008 UT

EAST-WEST SOLAR SCANS

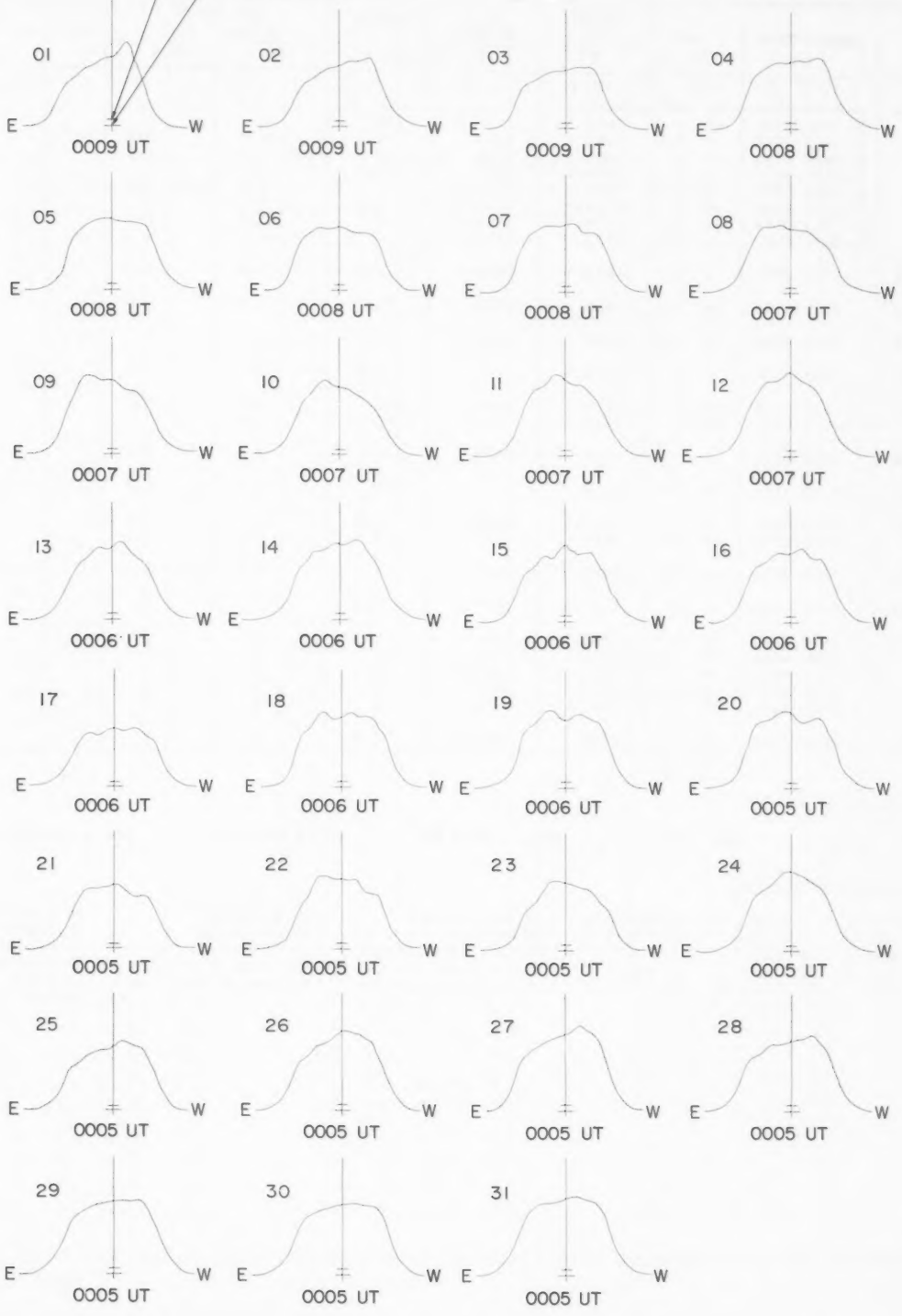
MAY 1976

Fleurs, Australia

ESTIMATED QUIET SUN LEVEL

COLD SKY LEVEL

43 cm
Fan-Beam with 4 minutes of arc
E-W Resolution



SOLAR RADIO EMISSION
SELECTED FIXED FREQUENCY EVENTS

MAY 1976

	FREQUENCY	STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1}		INT	REMARKS
				UT	UT	MINUTES	PEAK	MEAN		
1	2800	OTTA	21 GRF	2135		200 D	4.4			
	2695	BOUL	40 F	2140.5	2144.5	25	15	2		
	2800	OTTA	4 S/F	2141	2143	5	12.8	4.3		
	2800	OTTA	45 C	2155.5	2203	10	2.8	1.6		
	2695	BOUL	1 S	2207.5	2208	1.5	2	1		
	2800	OTTA	2 S/F	2211	2212.3	5	8	3.4		
	2695	BOUL	3 S	2211.5	2213.5	5.5	9	3		
	2800	OTTA	4 S/F	2228.5	2229.7	8	11.6	3		
	2695	BOUL	30 PBI	2229.5	2230.5	9	15	5		
2	2800	OTTA	8 S	1829.5	1829.8	0.5	0.8	0.4		
3	2800	OTTA	26 FAL	1635	1700	25	1.2	0.6		
9	2695	BOUL	3 S	2159	2201.5	5	4	1		
11	2695	BOUL	1 S	1616.5	1618	2.5	3	1		
12	2695	PENT	240 R	2240	2440	120	1.6	0.8		
	2695	PENT	24P R	2440		40 D	1.6			
14	2800	OTTA	1 S	2042	2043	8	0.6	0.4		
15	2800	OTTA	22 GRF	1050		190	1.4	0.8		
16	2695	MANI	3 S	0602.4	0605.1	6.5	11	3.7		1
	2800	OTTA	20 GRF	1415	1450	150	2.4	1.3		
18	2800	OTTA	20 GRF	1620	1645	95	2.6	1.3		
20	2695	BOUL	1 S	1415.5	1417.5	2.5	7	2		
21	2695	BOUL	3 S	2235.5	2241.5	10.5	6	2		
	2695	BOUL	3 S	2250	2253	6	7	2		
	2695	BOUL	45 C	2251.5	2301.5	12	6	2		
	2695	BOUL	1 S	2313.5	2315	2	4	1		
	2695	BOUL	45 C	2320	2321	4	3	1		
27	2695	BOUL	1 S	1540	1540.5	2.5	3	1		

Observatories:

BOUL = Boulder MANI = Manila OTTA = Ottawa ARO PENT = Penticton SGMR = Sagamore Hill

Explanation of Type Code:

1 Simple 1
2 Simple 1F
3 Simple 2
4 Simple 2F
5 Simple
6 Minor
7 Minor +
8 Spike
20 Simple 3
21 Simple 3A
22 Simple 3F
23 Simple 3AF
24 Rise
25 Rise A
26 Fall
27 Rise and Fall
28 Precursor
29 Post Burst Increase
30 Post Burst Increase A
31 Post Burst Decrease
32 Absorption
40 Fluctuation
41 Group of Bursts
42 Series of Bursts
43 Onset of Noise Storm
44 Noise Storm in Progress
45 Complex
46 Complex F
47 Great Burst
48 Major
49 Major +

SOLAR WIND

Interplanetary Scintillations

MAY 1976

UCSD 74 MHZ SCINTILLATIONS

DAY	3C48		3C144		3C147		3C161		3C237		3C273		3C298		3C459	
	VEL	ERR	VEL	ERR	VEL	ERR	VEL	ERR	VEL	ERR	VEL	ERR	VEL	ERR	VEL	ERR
1			292	16												
2	610	136					533	7	332	70	488	58			645	96
3	628	70	266	58	289	33					504	137	792	165	569	37
4	819	95	250	39			430	14			480	*			390	56
5	827	34	177	43			405	25							666	46
6	564	23	248	23			461	7								
7	652	63	217	1												
8			237	16							572	216	582	28		
9			273	6			413	58					408	*	218	*
10	797	75	275	53	610	*	341	46								
11	961	60	231	24			465	37								
11							356	36								
12			259	8			390	53					532	*	755	227
13	918	23	250	*	286	109	541	138	298	13			484	*	364	*
14	847	126	272	*	428	*	416	42								
15	658	37	278	15	351	81	590	44	313	54						
16			284	26	310	94	356	7								
17	1123	164	277	16	238	37					320	28			730	165
18	942	71	299	7												
19	584	9	289	*			436	*								
20	608	18	382	23			400	56			427	28	304	50	536	43
21	520	71					343	*					268	*		
22	802	58	460	*			486	35					366	122		
23	942	39	396	*			435	*								
24		0	457	*									244	95		
25	749	28	451	12			473	65					365	61		
26	950	93					314	9								
27	747	40					436	55	411	*						
28	575	39	412	27			510	47			205	74				
29	572	89													528	129
30	721	26	441	9	408	108	536	83								
31	642	73					538	53			400	87	351	40		

MAY	5				15				25			
	UT	LAT	DIST	DLON	UT	LAT	DIST	DLON	UT	LAT	DIST	DLON
3C48	19.	56.	0.40	34.	18.	43.	0.49	44.	18.	33.	0.59	43.
3C144	23.	-8.	0.62	-52.	22.	-9.	0.47	-62.	22.	-10.	0.32	-71.
3C147	22.	17.	0.73	-38.	21.	25.	0.64	-43.	21.	36.	0.55	-45.
3C161	0.	-24.	0.84	-26.	24.	-30.	0.76	-31.	23.	-37.	0.67	-34.
3C237	4.	-6.	1.12	-15.	3.	-5.	1.07	-16.	2.	-4.	1.02	-17.
3C273	6.	-3.	1.24	-9.	5.	-2.	1.21	-11.	4.	-1.	1.18	-13.
3C298	8.	0.	1.28	-4.	7.	1.	1.27	-6.	6.	2.	1.25	-8.
3C459	16.	6.	0.82	34.	16.	4.	0.90	25.	15.	3.	0.96	17.

* indicates data for which no error estimate is available, because only two antennas were operating.

3C 161 was observed at 0 hr.UT up to May 11, at 23 hr.UT after May 11.

SOLAR X-RAYS BY SATELLITE
SMS GOES

MAY 1976

.5 - 4Å Hourly Averages (10^{-6} watts/m^2)

D DA	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
5/ 1	0.02	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	0.05	B	B
5/ 2	B	B	A	A	A	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
5/ 3	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	A	A	B	B	A	A	B	B
5/ 4	B	B	B	A	A	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
5/ 5	B	B	A	A	A	B	B	B	B	A	A	A	B	B	B	B	B	B	B	B	B	B	B	B	B
5/ 6	B	B	A	A	A	B	B	B	B	B	A	A	B	B	B	B	A	B	B	A	A	B	B	B	B
5/ 7	B	B	B	A	A	B	B	B	B	B	A	A	A	B	B	A	A	A	B	B	B	B	B	B	B
5/ 8	B	B	B	A	A	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
5/ 9	B	B	B	B	A	A	A	A	A	A	A	A	B	B	B	B	B	B	B	B	B	B	B	B	B
5/10	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
5/11	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	A	B	B	B	B	B	B
5/12	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	0.06	B	B	B
5/13	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	0.01	B	B	B	B	B
5/14	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
5/15	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
5/16	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
5/17	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
5/18	B	B	A	A	A	A	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
5/19	B	B	B	A	B	B	B	B	B	B	B	B	B	B	A	A	A	A	A	B	B	B	B	B	B
5/20	B	B	B	B	A	B	B	B	B	B	B	B	B	B	A	A	A	A	A	A	A	A	A	B	B
5/21	B	B	B	B	A	A	A	A	A	A	A	A	A	B	B	B	B	B	B	B	B	B	B	B	B
5/22	B	B	B	A	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
5/23	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
5/24	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
5/25	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
5/26	B	B	B	A	A	A	A	A	A	A	A	A	A	B	B	B	B	A	A	A	B	B	B	B	B
5/27	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
5/28	B	B	B	A	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
5/29	B	B	B	A	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	A	B
5/30	A	A	A	A	B	A	B	B	0.06	0.03	B	B	B	B	A	B	B	B	B	B	B	B	B	B	B
5/31	B	B	A	A	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B

Note: "B" indicates the flux was below the cut-off levels.
"M" denotes periods of missing data.

SOLAR X-RAYS BY SATELLITE
SMS GOES

MAY 1976

1 - 8Å Hourly Averages (10^{-5} watts/m^2)

0 DA	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
5/ 1	0.02	0.02	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	0.01	0.05	0.02	B
5/ 2	B	B	1	1	1	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
5/ 3	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	1	1	B	B	1	1	B	B
5/ 4	B	B	B	1	1	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
5/ 5	B	B	1	1	1	B	B	B	B	1	1	1	B	B	B	B	B	B	B	B	B	B	B	B	B
5/ 6	B	B	1	1	1	B	B	B	B	B	1	1	B	B	B	B	1	B	B	1	1	B	B	B	B
5/ 7	B	B	B	1	1	B	B	B	B	B	1	1	1	B	B	1	1	1	B	B	B	B	B	B	B
5/ 8	B	B	B	1	1	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
5/ 9	B	B	B	B	1	1	1	1	1	1	1	1	B	B	B	B	B	B	B	B	B	B	B	B	B
5/10	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
5/11	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	1	B	B	B	B	B	B
5/12	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	0.07	B	B	B
5/13	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
5/14	0.01	B	B	B	B	B	0.04	B	0.02	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
5/15	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
5/16	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
5/17	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
5/18	B	B	1	1	1	1	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
5/19	B	B	B	1	B	B	B	B	B	B	B	B	B	B	1	1	1	1	1	B	B	B	B	B	B
5/20	B	B	B	B	1	B	B	B	B	B	B	B	B	B	1	1	1	1	1	1	1	1	1	B	B
5/21	B	B	B	B	1	1	1	1	1	1	1	1	1	B	B	B	B	B	B	B	B	B	B	B	B
5/22	B	B	B	1	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
5/23	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
5/24	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
5/25	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
5/26	B	B	B	1	1	1	1	1	1	1	1	1	1	B	B	B	B	1	1	1	B	B	B	B	B
5/27	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
5/28	B	B	B	1	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
5/29	B	B	B	1	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	1	B
5/30	1	1	1	1	B	1	0.05	0.02	0.05	B	B	B	0.01	B	1	B	B	B	B	B	B	B	B	B	B
5/31	B	B	1	1	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B

Note: "B" indicates the flux was below the cut-off levels.
"M" denotes periods of missing data.

SOLAR X-RAYS BY SATELLITE
SMS GOES

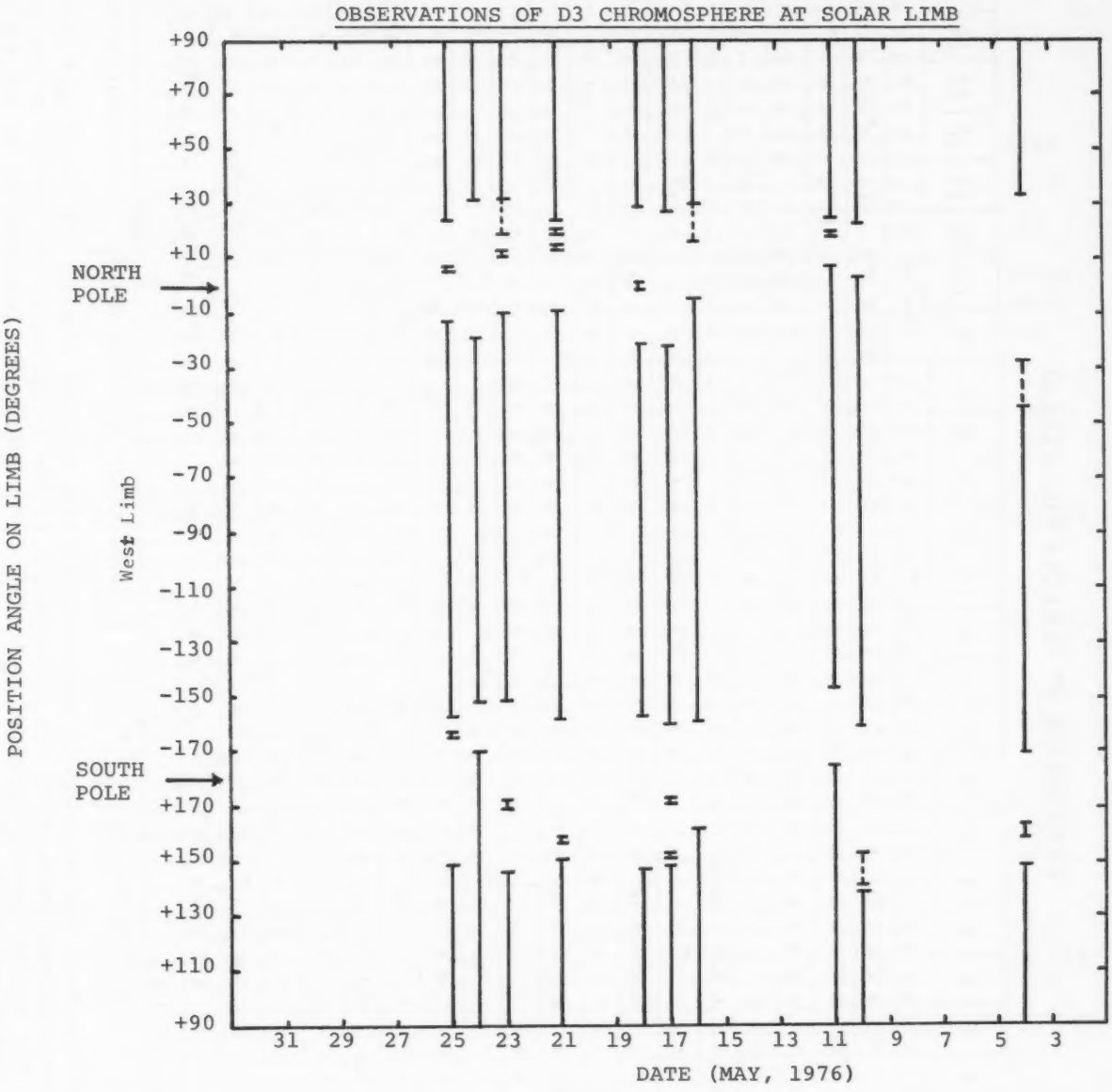
MAY 1976

DAY	BEGIN TIME	.5-4A Wm^{-2}	1-8A Wm^{-2}	MAX TIME	.5-4A Wm^{-2}	1-8A Wm^{-2}	1/2P TIME	.5-4A Wm^{-2}	1-8A Wm^{-2}
16	0559	0.0E+00	1.3E-07	0609	4.5E-07	7.4E-06	0614	1.0E-07	3.8E-06

CORONAL HOLES

Helium D3 Chromosphere at Solar Limb

MAY 1976



INFERRED IP MAGNETIC FIELD

BARTELS ROTATION	DATE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1934	DEC 31	TATT	TTAT	ATAA	TAAT	AT-A	-A-T	ATAA	TAAA	ATAT	-AA*	A*A*	*TTT	TTTT	TTTT	TTTT	TTT*	T*TT	T*TT	TTTT	TTTT	TTT*	AAAA	AATA	T*A*	AAAA	AAAA	AAAA
1935	1975 JAN 27	TTTT	ATAT	A*AT	A*A-	TAAA	TTAT	ATAT	ATAT	ATAT	ATA-	TTTT	TTAT	TTTT	TAT-	TTTT	TTTT	TTTT	TTT*	T-TA	ATAT	A*AT	TATA	TATA	TAAA	AAAA	AAAA	AAAA
1936	FEB 23	TAAA	AAAA	A*TA	AAAT	AAAA	AAAA	AAAA	AAAA	ATTT	TAAA	AAAA	AAAT	TTTT	TAT*	TTTT	TTTA	TA*T	TTTT	TTTA	T*TT	TAAA	TTTT	TAT*	TTTT	AAAA	AAAA	AAAA
1937	MAR 22	AAAA	TAAA	TTAA	A*AA	AAAA	AAAA	ATA*	TAAA	AAAT	*TAA	TTTT	TTT*	TAT*	TTTT	TTTT	*TTA	T*TT	AATA	TTTA	TTTA	ATAA	TTTT	AAAA	TTTT	AAAA	AAAA	AAAA
1938	APR 18	AAAA	AAAA	AAA*	AA*A	A-AA	AAAA	AAAA	AAAA	AAAA	AAAT	TTAA	AAAT	TT-T	TTT-	TTTT	TTTA	A*TT	TTTT	TTTA	TATT	A*TT	TTTT	-ATA	TATT	TTTA	TTTT	TAAA
1939	MAY 15	TTAA	TATA	AAAT	TTAA	TA-*	A-AA	AAAA	AAAA	AAAA	----	----	----	----	----	----	----	----	----	----	----	T-*-	*-*-	*T*T	TTTT	TAAA	AAAA	AAAA
1940	JUN 11	AAAA	AAAA	AAAA	AAAA	*---	----	----	----	----	AAAA	TAAA	ATAA	AAAA	AAAA	AAAT	TTTT	TTAA	TA*A	AATT	TTTT	T*T*T	TTTT	TTTT	TTTT	AAAA	AAAA	AAAA
1941	JUL 8	AAAA	AAAA	AAAA	TA*A	ATAA	TAAA	TA*A	AATA	TAAA	TTAA	AAAT	-*AA	*AA*	ATAA	TTTT	TTTA	TAAT	TTTT	TTTA	ATAT	TTTT	TTTT	TTTT	ATAT	AAAA	AAAA	AAAA
1942	AUG 4	AAAA	AATA	ATTA	ATAA	TTAT	TAAA	AAAA	AAAA	AAAA	AAAA	AAAA	AAAA	ATTT	-ATT	*.TT	TATT	TTTT	TTTT	-ATA	TTTT	TTTT	-ATA	TTTT	TTTT	AAAA	AAAA	AAAA
1943	AUG 31	AAAA	TAA*	TTAA	AAAA	TAAA	TA*A	ATTT	*AAA	AAAA	AAAA	AAAA	AAA*	AAA*	A*A*	ATTT	TTTT	TTT-	TTAT	TTTT	TTTT	TTTA	TTTT	TTTT	TTTT	TTTA	TAAA	AAAA
1944	SEP 27	AATA	AAAA	AAAA	TTTA	T-A-	A-A-	AA*A	AAAA	AAAA	AAAA	AAA*	ATAA	TTAA	AAAA	TTTA	ATAA	AAAT	*TAT	TTTA	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT	TAA-	A--
1945	OCT 24	TTTT	TTTT	TTTT	TTTA	AAA*	AAAA	AAAA	AAAA	AAAA	A*A*	A*AA	AAA*	AAA*	AT-A	T-AT	-ATT	ATTT	TTTT	TTTT	TTTT	TTTT	TTTT	TTTA	T*TT	TTTT	TTTT	TTTT
1946	NOV 20	ATA*	TTTA	TTAA	T*A*	T*AA	AAA-	A-A-	A-A-	AAAA	AAAA	AAA*	AAA*	AAA*	AAAA	AAAA	AAAA	AATA	ATAT	TTTT	TTTT	TTTT	TTTT	TTTT	*TTT	TTTT	TTTT	TTTT
1947	DEC 17	T-TT	TTTT	TTTT	TTTT	TTTA	*ATA	TTA*	TTTA	AA*A	TAT*	TAAA	AAAA	*AAA	AAAA	AAAA	AAAA	AAAT	T*TA	T*A*	TTTT	TTTT	TTTT	TTTT	TTTA	*TA*	T*T*	TTTT
1948	1976 JAN 13	TATT	T*TA	TTAA	TAAT	AAAT	AAAA	TAAT	AAAA	TAAA	-A-A	-A*A	AAA-	AAAA	A-A-	AAAA	-AAA	-A-A	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT	TATT	TTT
1949	FEB 9	TATA	TTT-	T-T-	ATTT	-ATA	TAAT	ATAA	TATA	TAAT	A*TT	AAAT	AAAA	AAAA	AAAA	AAAA	TAAA	TTTT	T*TA	TTTT	TTTT	TTTT	*TAT	TATA	TA*T			
1950	MAR 7	TATA	TTTT	TTTT	TTTT	-TTA	A*AA	ATAA	TAAA	AAAA	AAAA	AAAA	AAAA	AAAA	AAAA	AAAA	*T*T	ATTT	TTTT	TTTT	T*TT	TTTT	-TAT	TTTT				
1951	APR 3	TTTT	TTTT	TTTT	TTTT	TTT*	AAAA	AAAA	AAAA	AAAA	*AAA	AAAA	AAAA	AAAA	AAAA	AAAA	AAAA	AAAA	ATAT	ATA*	AT*T	TTTT	*ATT	TAA*				
1952	APR 30	TTAT	TTTT	TTTT	TTTT	TTTT	TTTA	AAT*	AAAA	-AAA	AAAA	AAA-	AAA-	TTAA	AA*A	TAAT	ATAT	TTTA	A*TT	AA*T	TAAA	T-TT						
1953	MAY 27	T-TT	TTTT	T																								

T = towards the sun A = away from the sun * = effect doubtful or not discernable - = missing data

The table shows daily inferences of the polarity of the interplanetary magnetic field. The first half of the day is based principally on magnetograms produced by the magnetometer at the Vostok Antarctic Station of the USSR. The magnetometer of the U.S. Air Weather Service operated by the Air Force Geophysics Laboratories at the Thule Geopole Station is used for the second half of the day.

APRIL 1976 DATA

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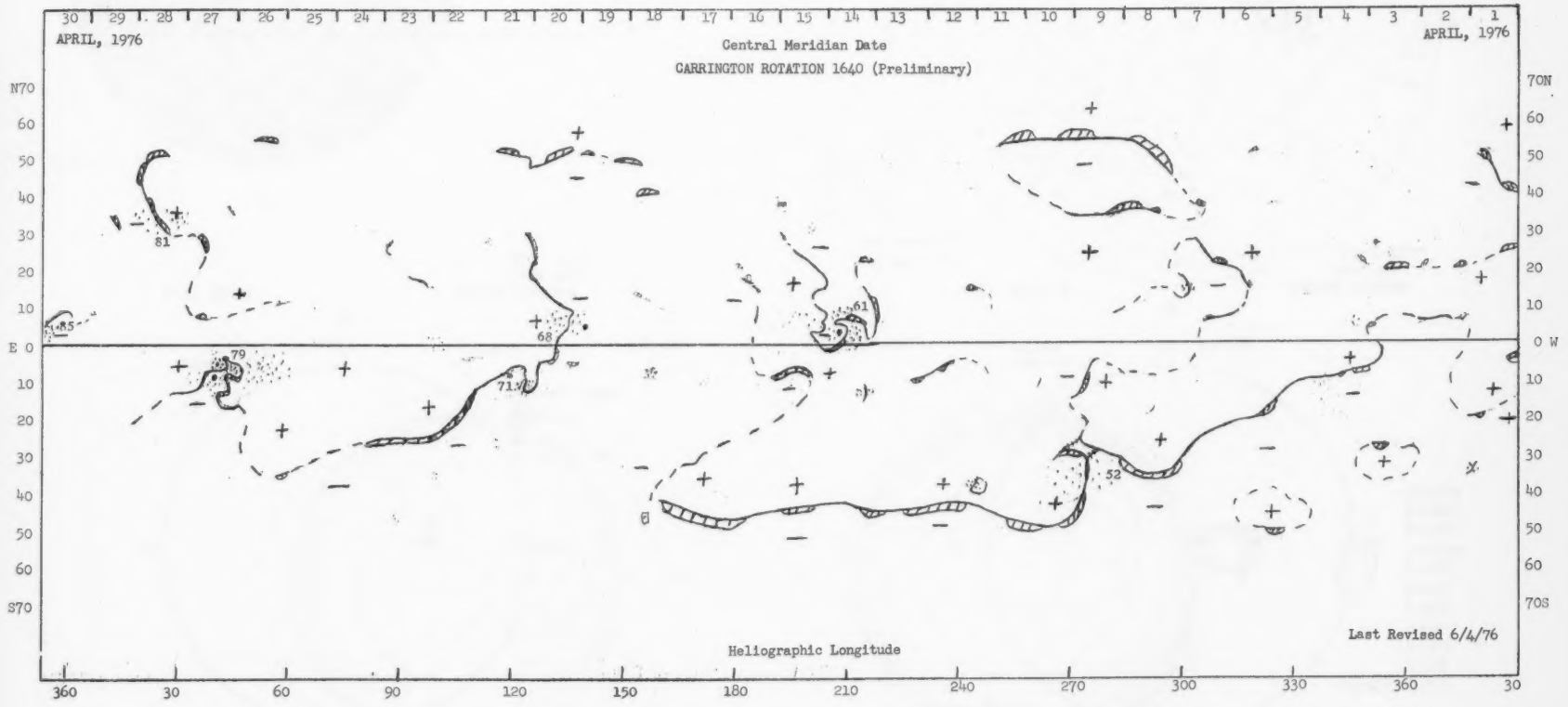
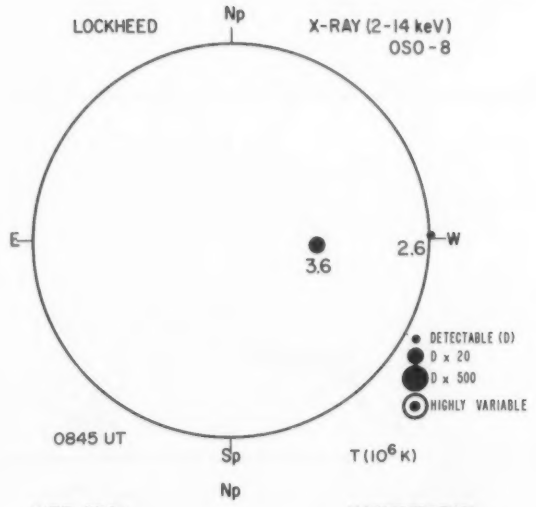
Hα SYNOPTIC CHART

APRIL 1976



25 Apr 76

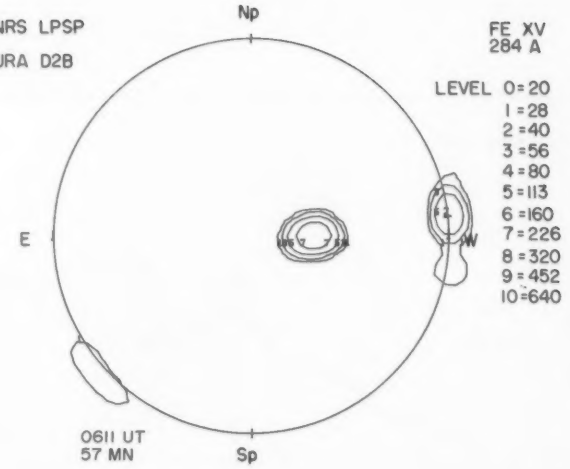
APRIL 1, 1976 (P =-26.21, B_o =-6.52, L_o =29.89)

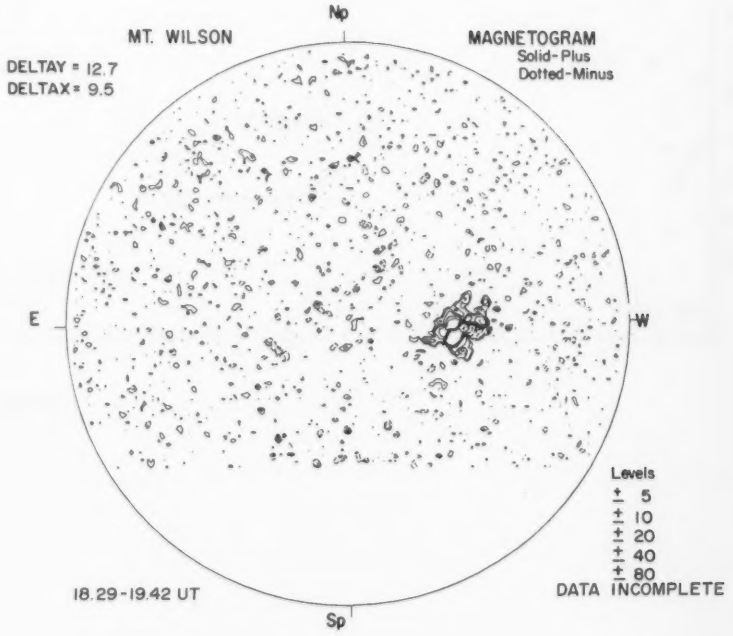


KITT PEAK

MAGNETOGRAM
Bright - Plus
Dark - Minus

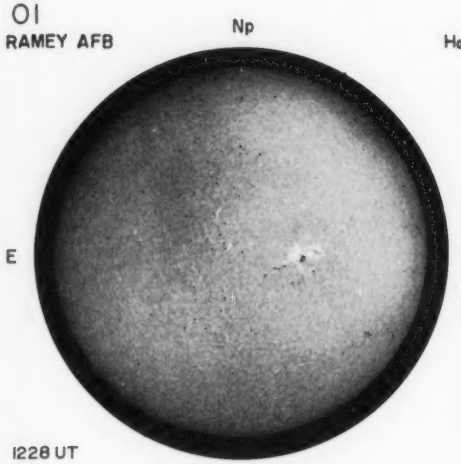
E NO MAGNETOGRAMS WERE PRODUCED AT KITT PEAK OBSERVATORY DURING THE MONTH OF APRIL 1976. W





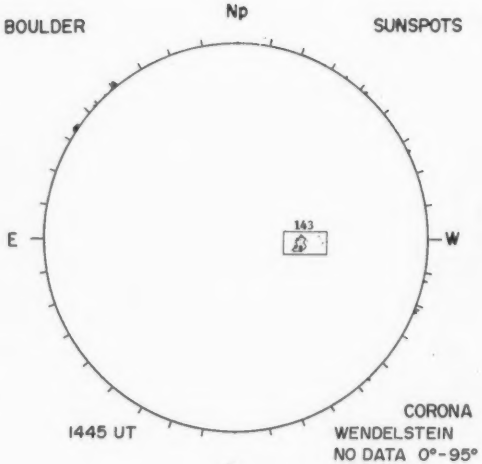
01

RAMEY AFB



1228 UT

Hα BOULDER

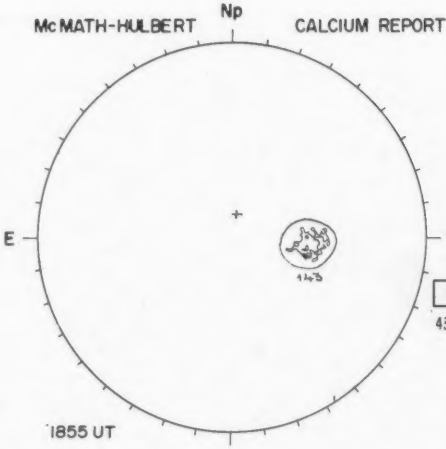


1445 UT

SUNSPOTS

CORONA
WENDELSTEIN
NO DATA 0°-95°
135°-260°
295°-355°

McMATH-HULBERT

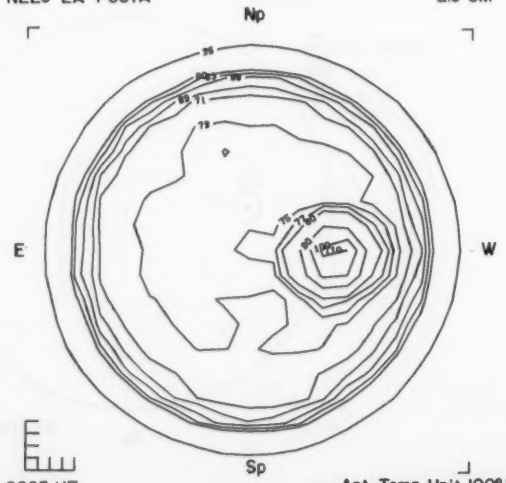


1855 UT

CALCIUM REPORT

FAIR M
43 2500 3.0

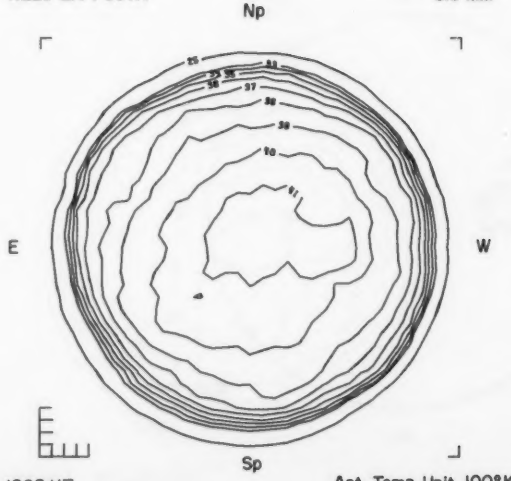
NELC LA POSTA 2.0 CM



2005 UT

Ant. Temp. Unit 100°K

NELC LA POSTA 8.6 MM

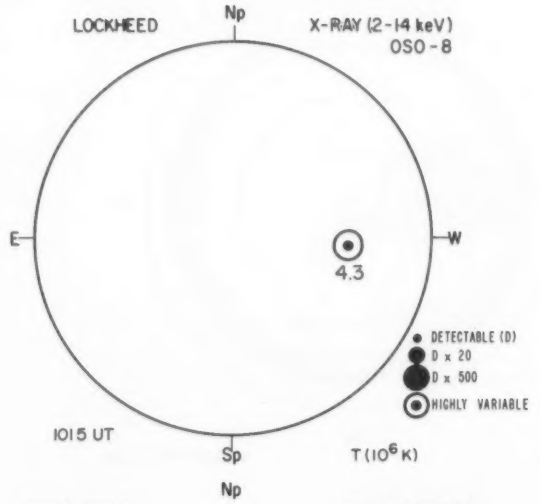


1828 UT

Ant. Temp. Unit 100°K

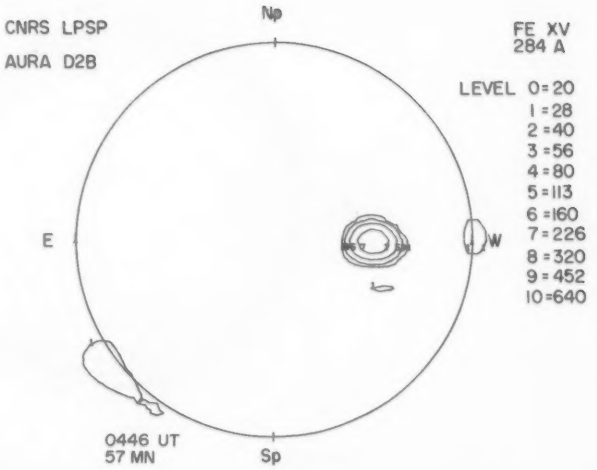
27 Apr 76

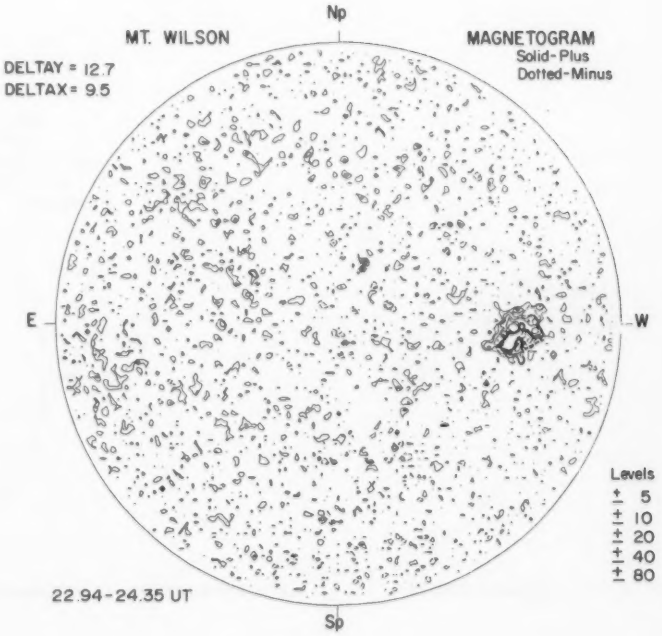
APRIL 2, 1976 (P =-26.25, B_o =-6.46, L_o =16.70)



KITT PEAK

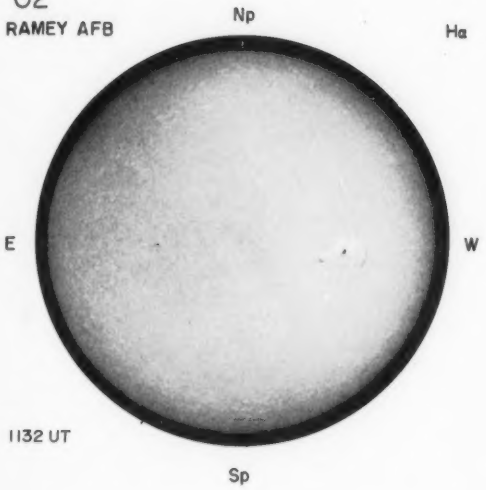
MAGNETOGRAM
Bright - Plus
Dark - Minus





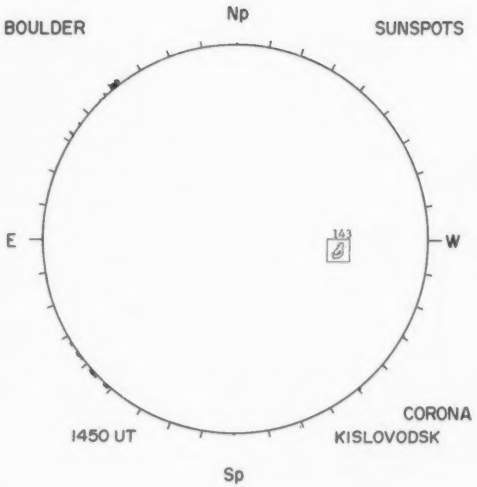
02

RAMEY AFB



1132 UT

Hα BOULDER



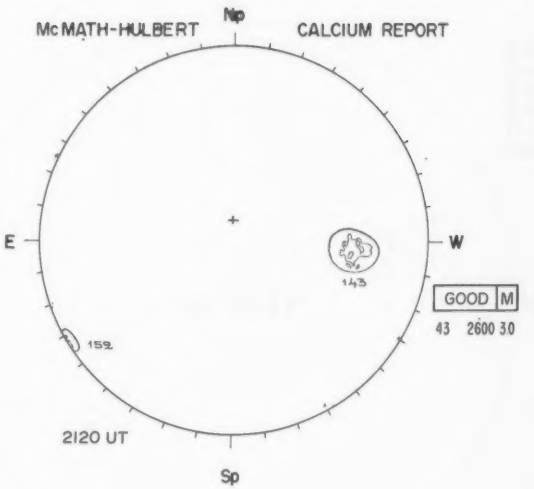
1450 UT

SUNSPOTS

CORONA

KISLOVODSK

McMATH-HULBERT



2120 UT

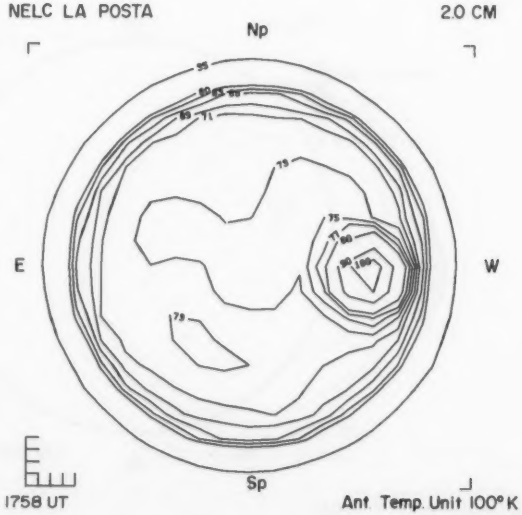
CALCIUM REPORT

GOOD | M

43 2600 30

NELC LA POSTA

2.0 CM

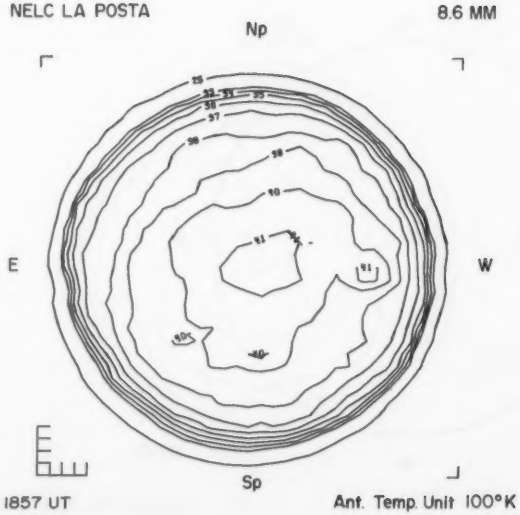


1758 UT

Ant. Temp. Unit 100°K

NELC LA POSTA

8.6 MM



1857 UT

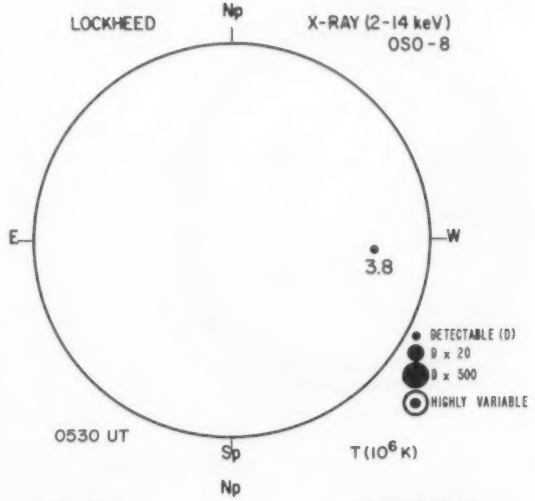
Ant. Temp. Unit 100°K

29 Apr 76

APRIL 3, 1976 (P =-26.28, B_o =-6.40; L_o =3.51)

LOCKHEED

X-RAY (2-14 keV)
OSO-8



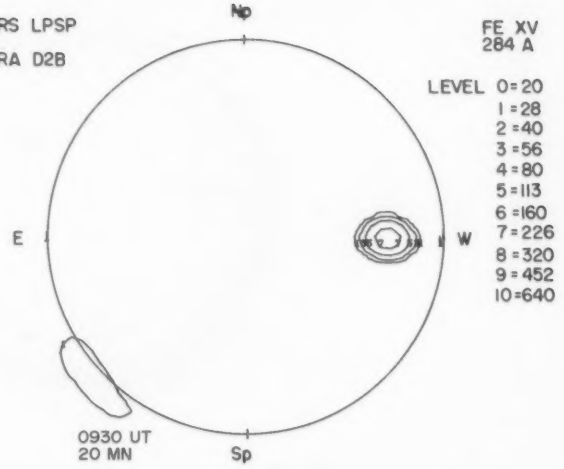
KITT PEAK

MAGNETOGRAM
Bright - Plus
Dark - Minus

CNRS LPSP
AURA D2B

FE XV
284 A

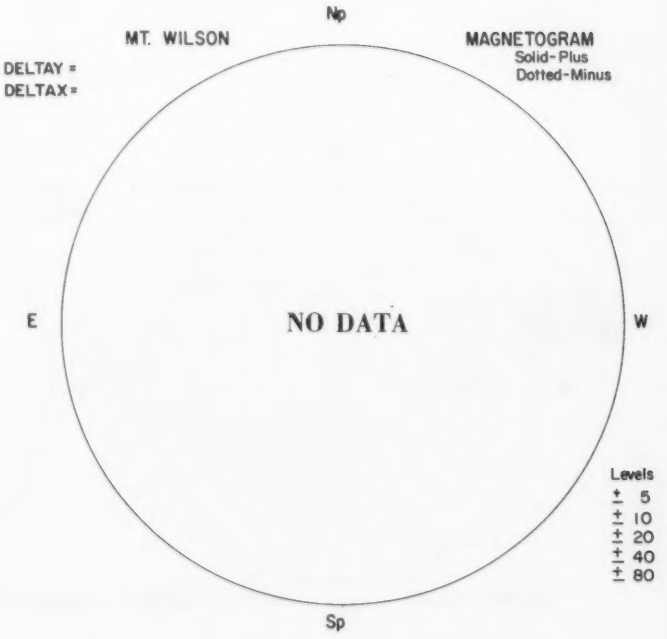
LEVEL 0=20
1=28
2=40
3=56
4=80
5=113
6=160
7=226
8=320
9=452
10=640



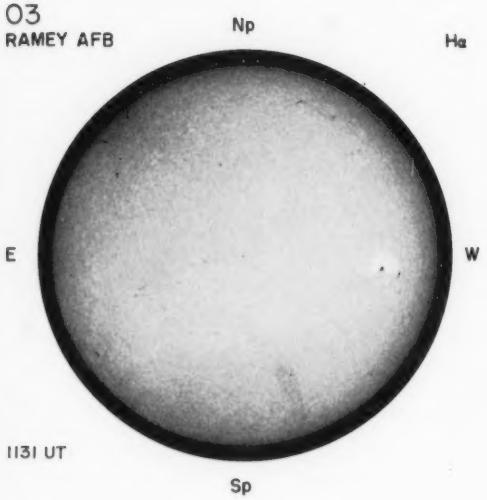
MT. WILSON

MAGNETOGRAM
Solid - Plus
Dotted - Minus

DELTAY =
DELTAX =

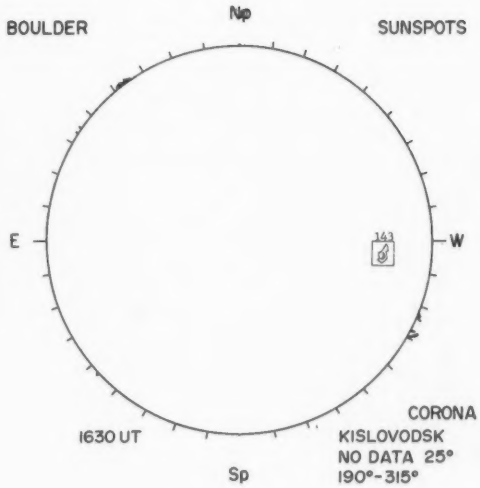


03
RAMEY AFB



1131 UT

BOULDER

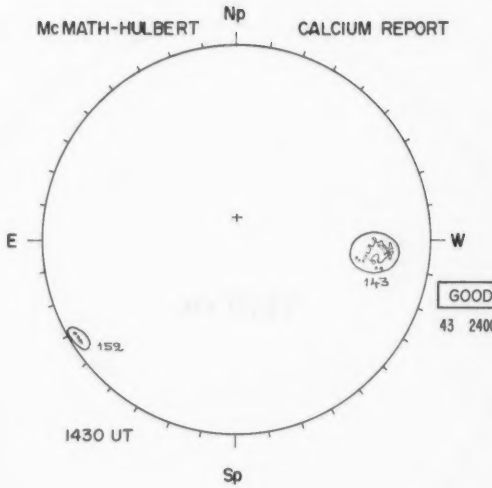


1630 UT

SUNSPOTS

CORONA
KISLOVODSK
NO DATA 25°
190°-315°

McMATH-HULBERT



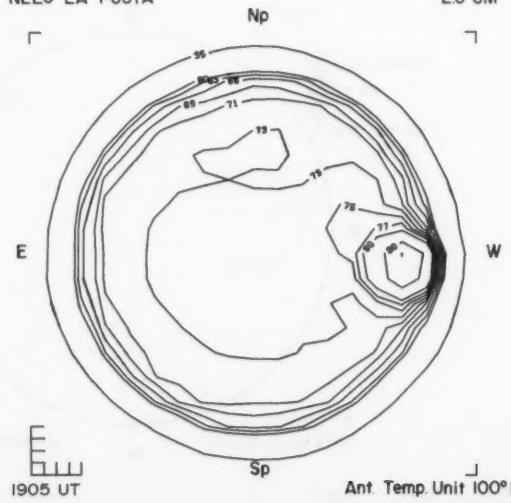
1430 UT

CALCIUM REPORT

GOOD	M
43	2400 3.0

NELC LA POSTA

2.0 CM

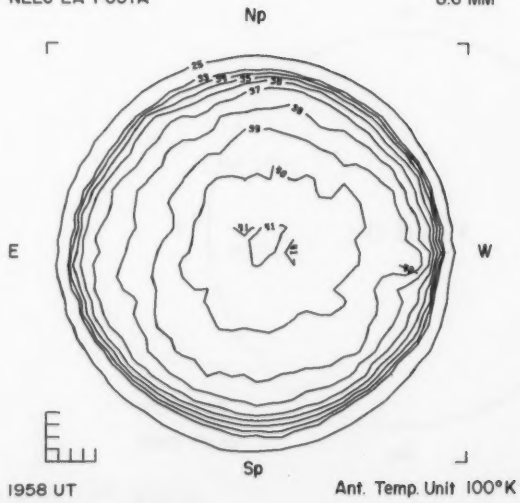


1905 UT

Ant. Temp. Unit 100°K

NELC LA POSTA

8.6 MM



1958 UT

Ant. Temp. Unit 100°K

APRIL 4, 1976 (P = -26.31, B_o = -6.34, L_o = 350.31)

LOCKHEED

Np

X-RAY (2-14 keV)
OSO-8

E

W

3.2

2.8

DETECTABLE (D)
D x 20
D x 500
HIGHLY VARIABLE

0530 UT

Sp

T(10^6 K)

Np

KITT PEAK

MAGNETOGRAM
Bright - Plus
Dark - Minus

CNRS LPSP
AURA D2B

Np

FE XV
284 A

LEVEL 0 = 20
1 = 28
2 = 40
3 = 56
4 = 80
5 = 113
6 = 160
7 = 226
8 = 320
9 = 452
10 = 640

E

NO DATA

W

Sp

Np

MT. WILSON

MAGNETOGRAM
Solid - Plus
Dotted - Minus

DELTAY =
DELTAX =

E

NO DATA

W

Sp

Levels
± 5
± 10
± 20
± 40
± 80

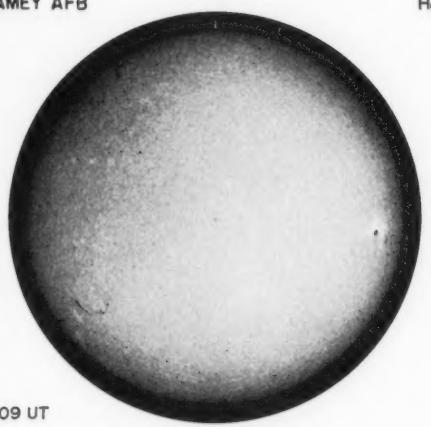
E

W

Sp

04

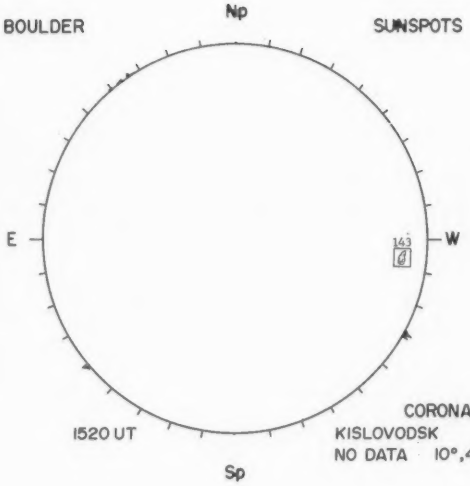
RAMEY AFB



1209 UT

Hα

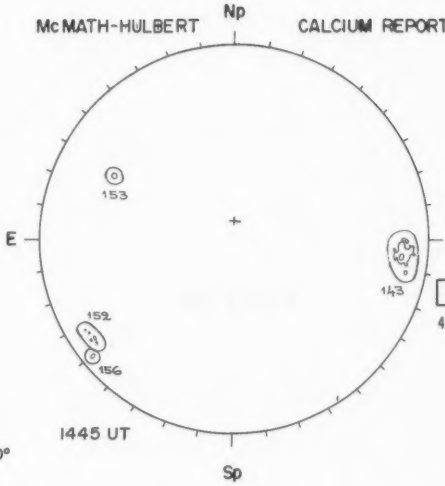
BOULDER



1520 UT

SUNSPOTS

McMATH-HULBERT



1445 UT

CALCIUM REPORT

FAIR D

43 .2200 40

CORONA

KISLOVODSK

NO DATA 10°,40°

NELC LA POSTA

Np

2.0 CM

NO DATA

E

CLOUDY

W

Sp

1906 UT

Ant. Temp. Unit 100°K

NELC LA POSTA

Np

8.6 MM

NO DATA

E

WEATHER

W

Sp

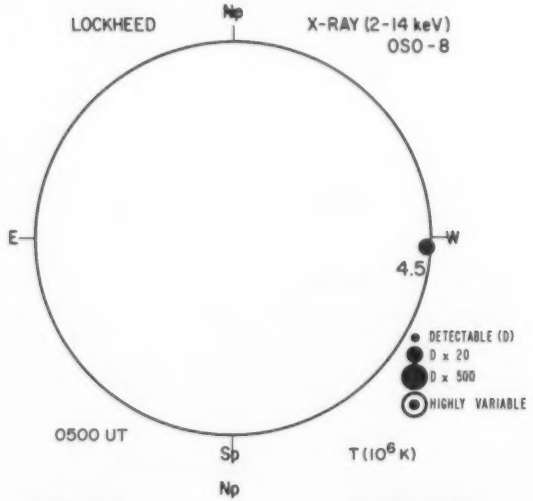
---- UT

Ant. Temp. Unit 100°K

APRIL 5, 1976 (P =-26.32, B_0 =-6.28, L_0 =337.12)

LOCKHEED

X-RAY (2-14 keV)
OSO-8



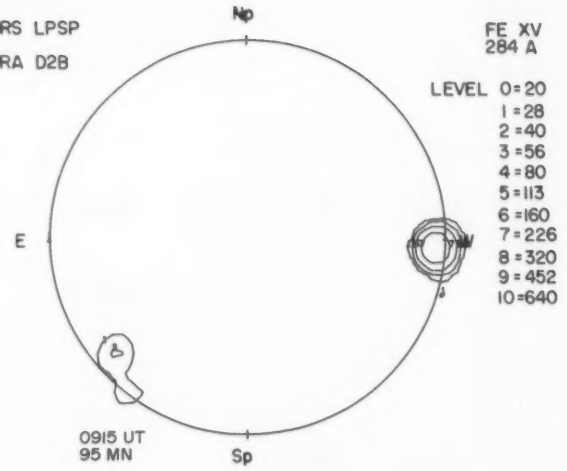
KITT PEAK

MAGNETOGRAM
Bright - Plus
Dark - Minus

CNRS LPSP
AURA D2B

FE XV
284 A

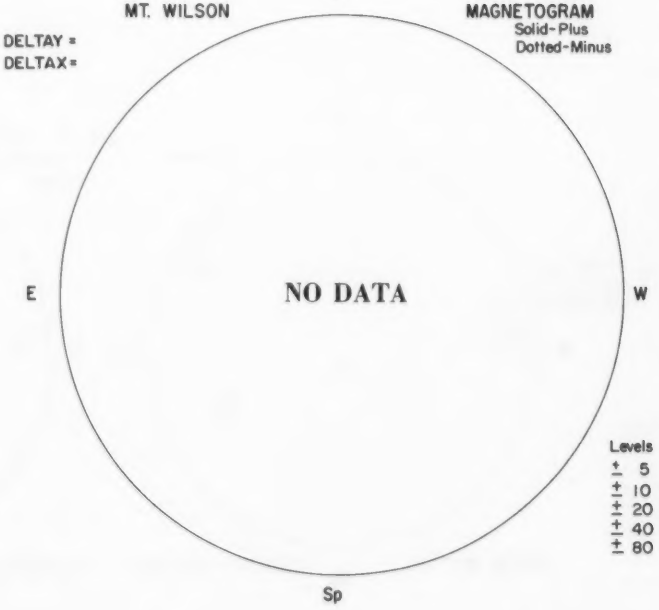
LEVEL 0=20
1=28
2=40
3=56
4=80
5=113
6=160
7=226
8=320
9=452
10=640



MT. WILSON

MAGNETOGRAM
Solid-Plus
Dotted-Minus

DELTAY =
DELTAX =



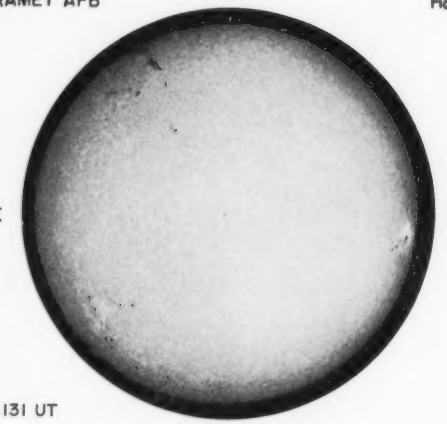
Levels
± 5
± 10
± 20
± 40
± 80

05

RAMEY AFB

Np

Hα



E W

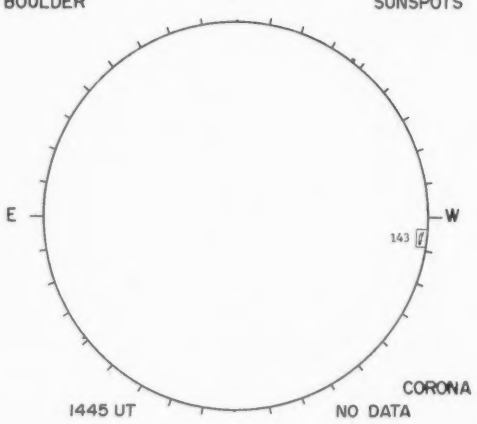
1131 UT

Sp

BOULDER

Np

SUNSPOTS



E W

1445 UT

Sp

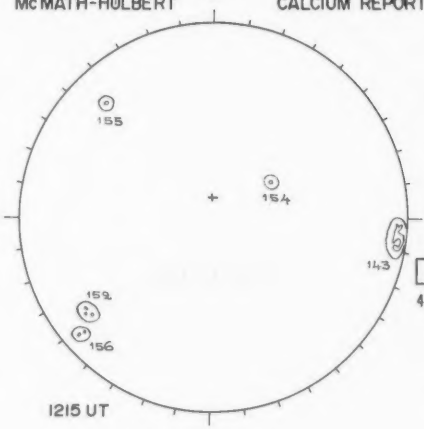
CORONA

NO DATA

McMATH-HULBERT

Np

CALCIUM REPORT



E W

1215 UT

Sp

FAIR D

43 2000 4.0

NELC LA POSTA

Np

2.0 CM

NO DATA

E W

WEATHER

Sp

---- UT

Ant. Temp. Unit 100°K

NELC LA POSTA

Np

8.6 MM

NO DATA

E W

WEATHER

Sp

---- UT

Ant. Temp. Unit 100°K

APRIL 6, 1976 (P=-26.33, B_o=-6.22, L_o=323.92)

LOCKHEED

Np

X-RAY (2-14 keV)
OSO-8

E

W

2.6

3.0

DETECTABLE (D)
D x 20
D x 500
HIGHLY VARIABLE

0500 UT

Sp

T(10^6K)

Np

KITT PEAK

MAGNETOGRAM
Bright - Plus
Dark - Minus

CNRS LPSP
AURA D2B

Np

FE XV
284 A

LEVEL 0=20
1=28
2=40
3=56
4=80
5=113
6=160
7=226
8=320
9=452
10=640

0533 UT
55 MN

Sp

Np

MT. WILSON

MAGNETOGRAM
Solid - Plus
Dotted - Minus

DELTAY =
DELTAX =

E

NO DATA

W

Levels
± 5
± 10
± 20
± 40
± 80

Sp

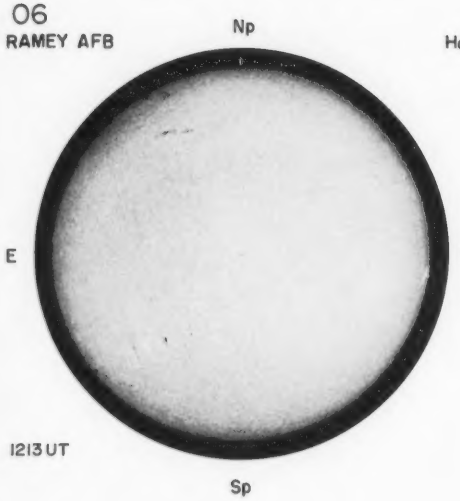
E

W

Sp

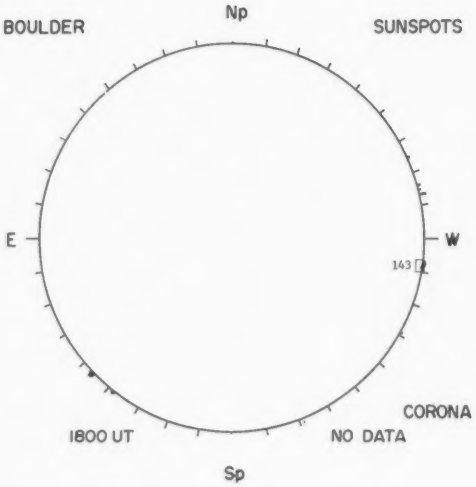
06

RAMEY AFB



1213 UT

Hα BOULDER



1800 UT

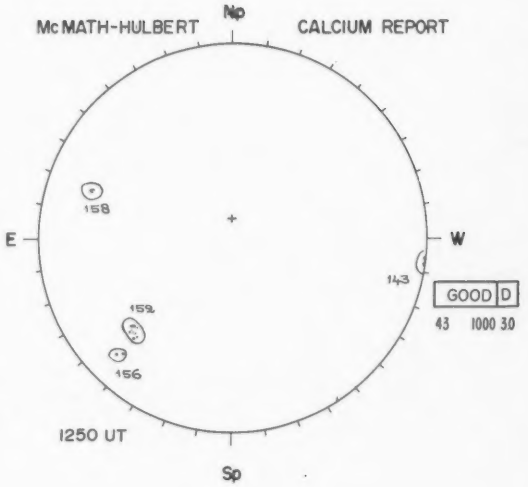
SUNSPOTS

CORONA

NO DATA

McMATH-HULBERT

CALCIUM REPORT

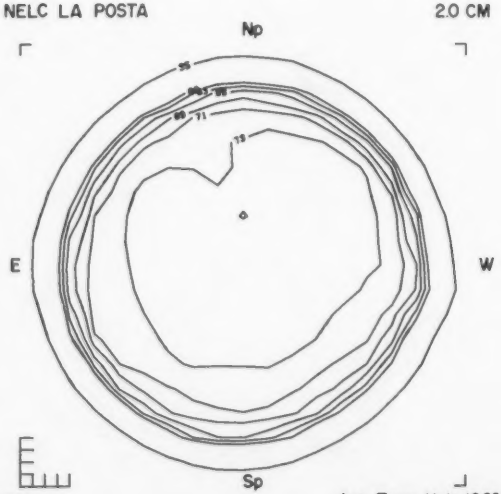


1250 UT

GOOD D

43 1000 30

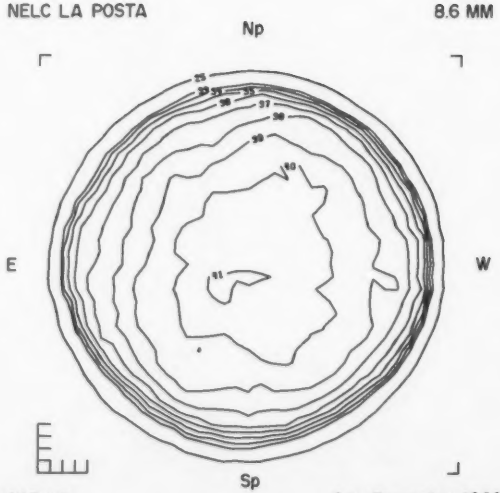
NELC LA POSTA 2.0 CM



1719 UT

Ant. Temp. Unit 100°K

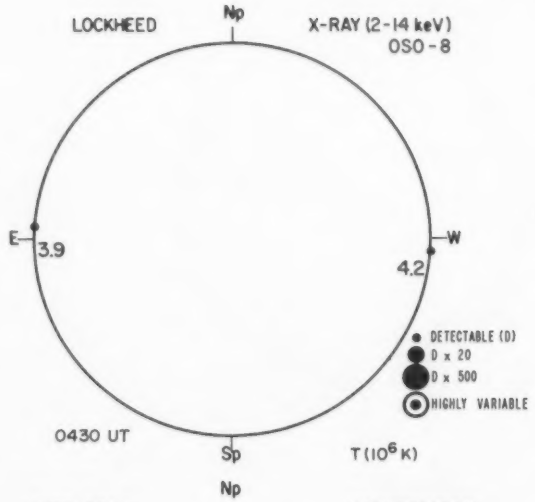
NELC LA POSTA 8.6 MM



1927 UT

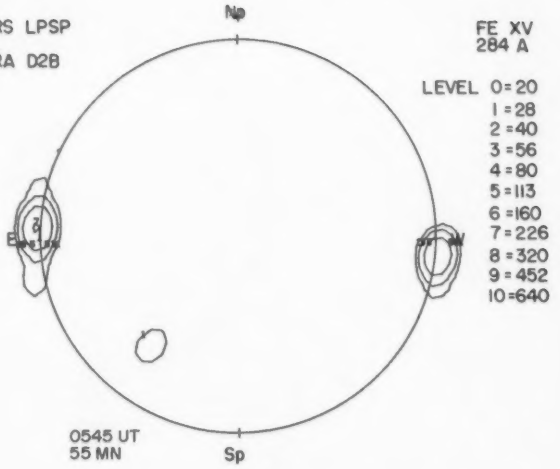
Ant. Temp. Unit 100°K

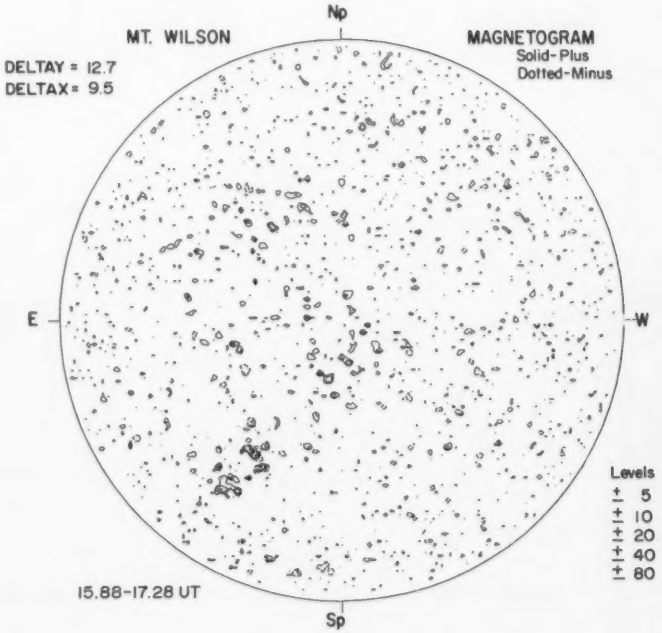
APRIL 7, 1976 (P = -26.33, B_0 = -6.15, L_0 = 310.72)



KITT PEAK

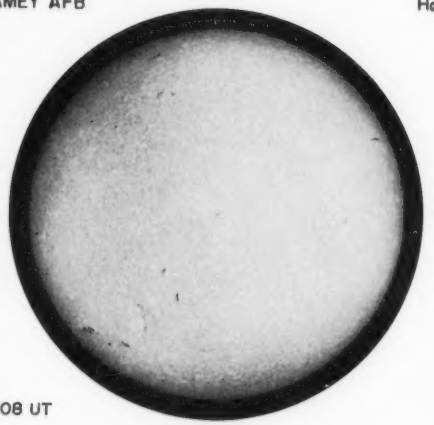
MAGNETOGRAM
Bright - Plus
Dark - Minus





07

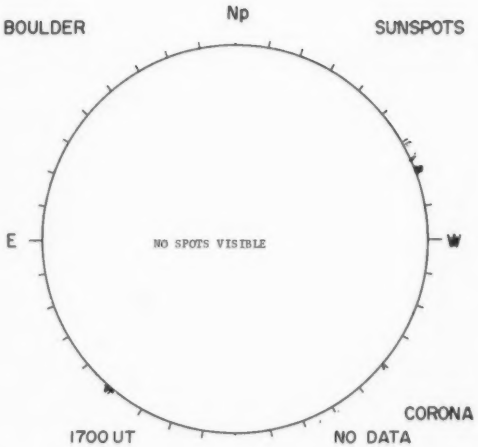
RAMEY AFB



1208 UT

Hα

BOULDER



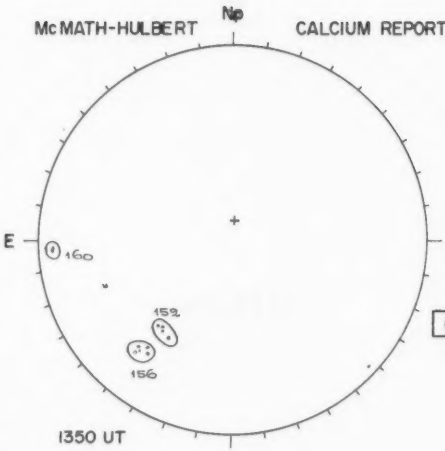
1700 UT

SUNSPOTS

CORONA

NO DATA

McMATH-HULBERT



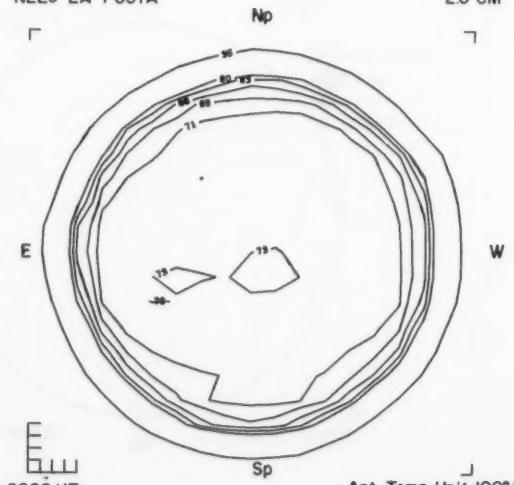
1350 UT

CALCIUM REPORT

GOOD | S

NELC LA POSTA

2.0 CM

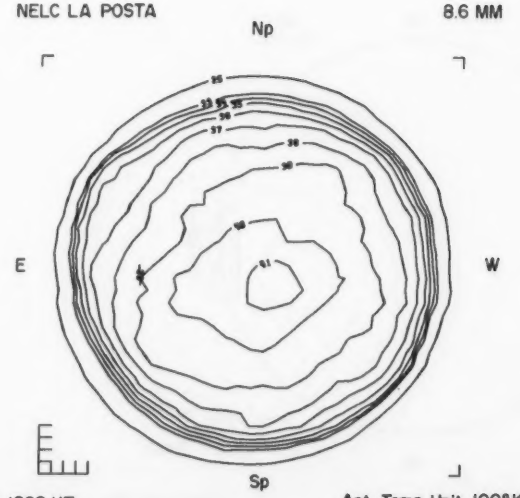


2022 UT

Ant. Temp. Unit 100°K

NELC LA POSTA

8.6 MM



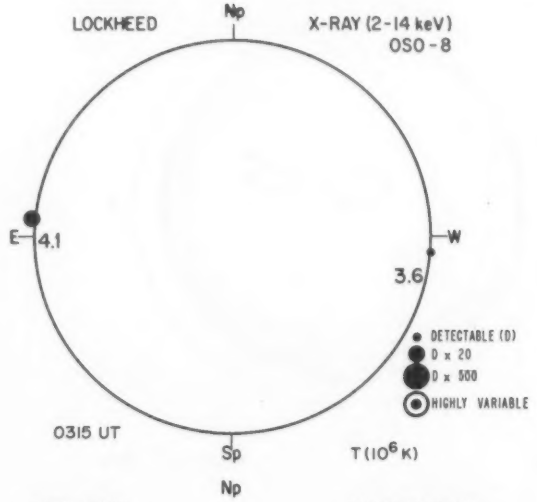
1829 UT

Ant. Temp. Unit 100°K

APRIL 8, 1976 (P =-26.32, B_o =-6.09, L_o =297.53)

LOCKHEED

X-RAY (2-14 keV)
OSO-8



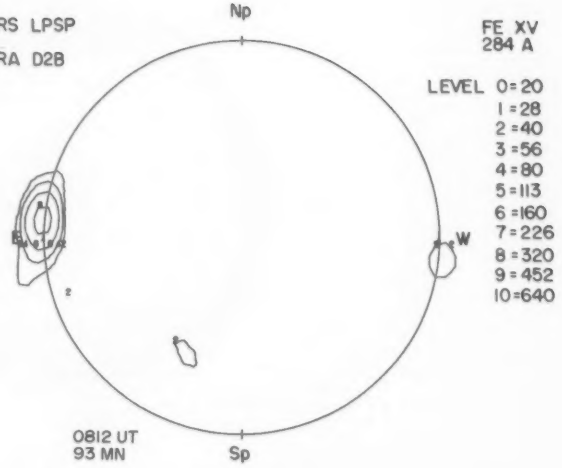
KITT PEAK

MAGNETOGRAM
Bright - Plus
Dark - Minus

CNRS LPSP
AURA D2B

FE XV
284 A

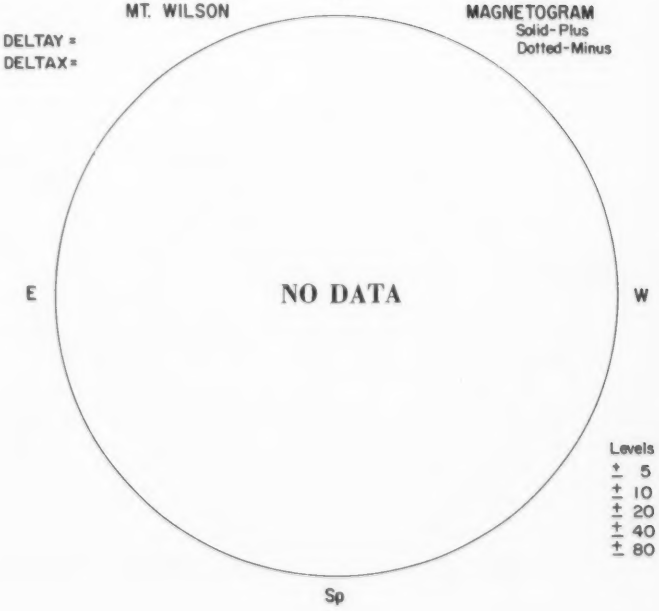
LEVEL 0=20
1=28
2=40
3=56
4=80
5=113
6=160
7=226
8=320
9=452
10=640



MT. WILSON

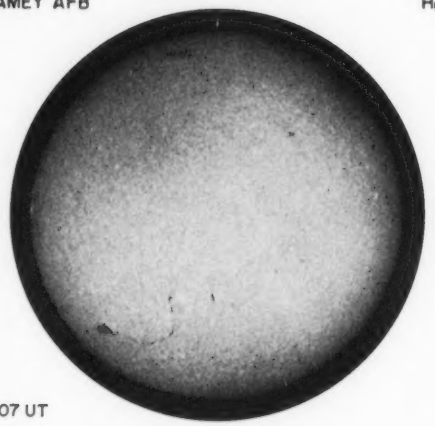
DELTAY =
DELTAX =

MAGNETOGRAM
Solid - Plus
Dotted - Minus



08

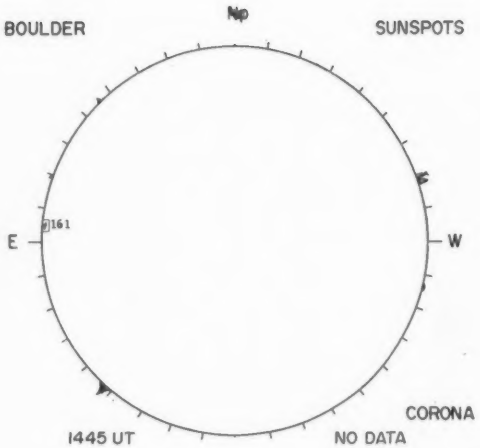
RAMEY AFB



1207 UT

Hα

BOULDER



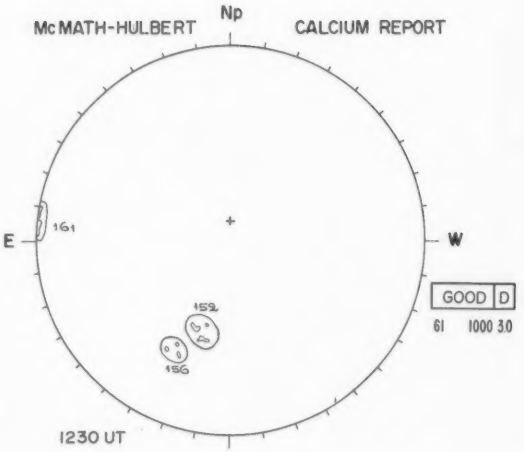
1445 UT

SUNSPOTS

CORONA

NO DATA

McMATH-HULBERT



1230 UT

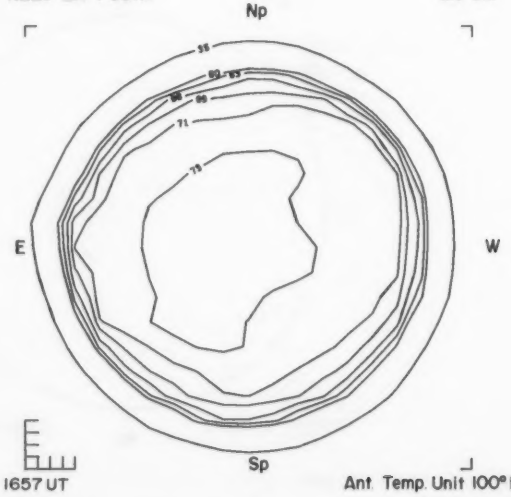
CALCIUM REPORT

GOOD D

61 1000 3.0

NELC LA POSTA

2.0 CM

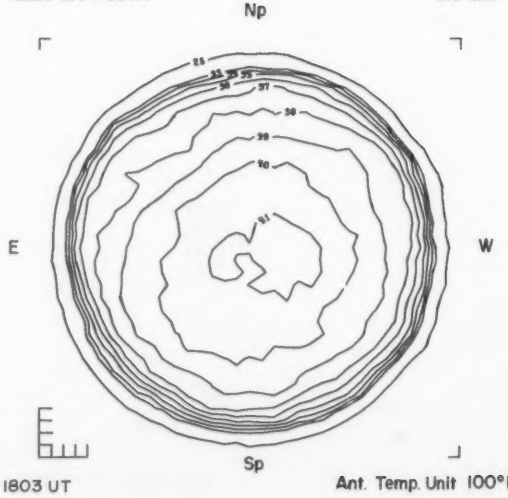


1657 UT

Ant. Temp. Unit 100°K

NELC LA POSTA

8.6 MM

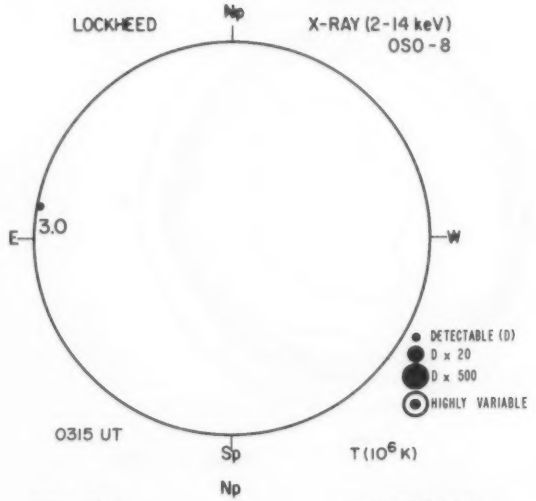


1803 UT

Ant. Temp. Unit 100°K

APRIL 9, 1976 (P =-26.31, B_o =-6.02, L_o =284.33)

LOCKHEED X-RAY (2-14 keV)
OSO-8



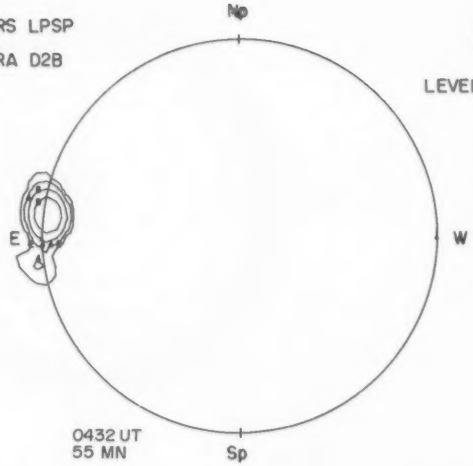
KITT PEAK

MAGNETOGRAM
Bright - Plus
Dark - Minus

CNRS LPSP
AURA D2B

FE XV
284 A

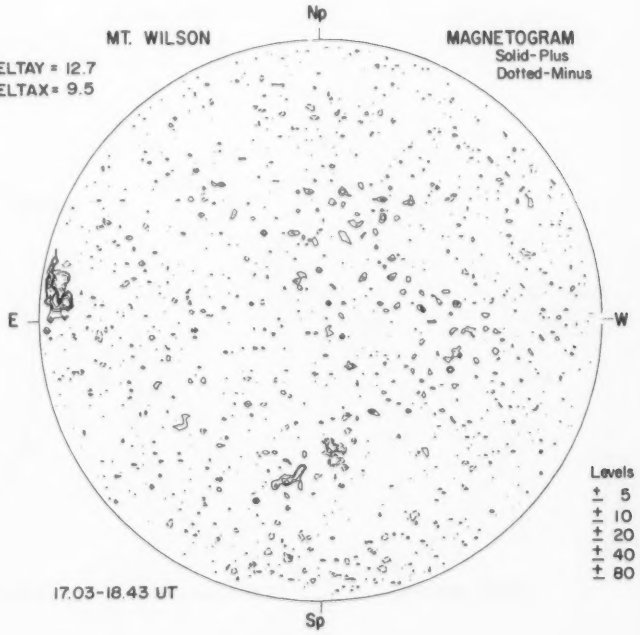
LEVEL 0=20
1=28
2=40
3=56
4=80
5=113
6=160
7=226
8=320
9=452
10=640



MT. WILSON

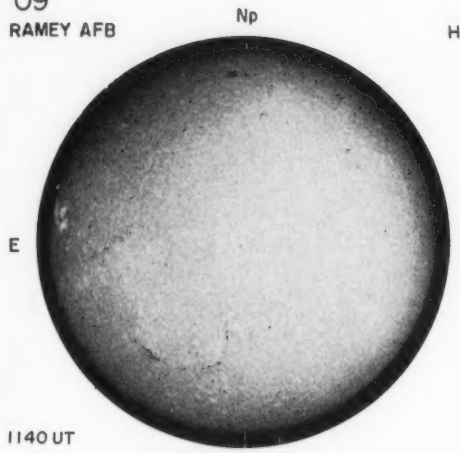
MAGNETOGRAM
Solid-Plus
Dotted-Minus

DELTAY = 12.7
DELTAX = 9.5



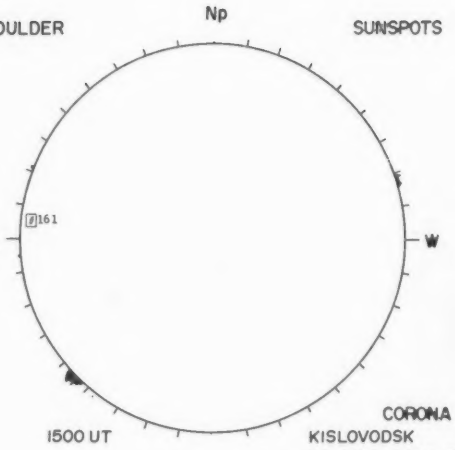
09

RAMEY AFB



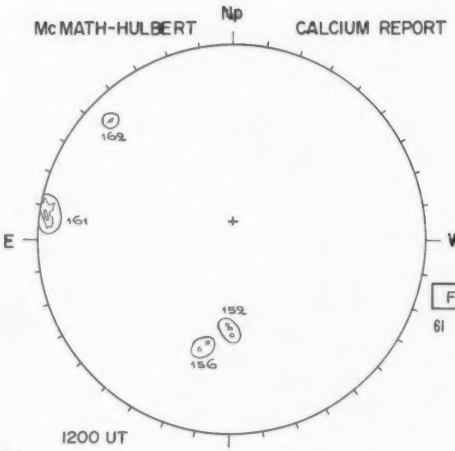
1140 UT

Hα BOULDER



1500 UT

SUNSPOTS



1200 UT

McMATH-HULBERT CALCIUM REPORT

FAIR D

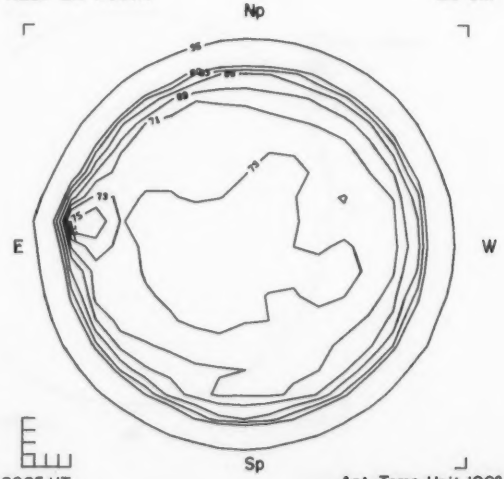
61 2000 3.5

CORONA

KISLOVODSK

NO DATA 200°-325°

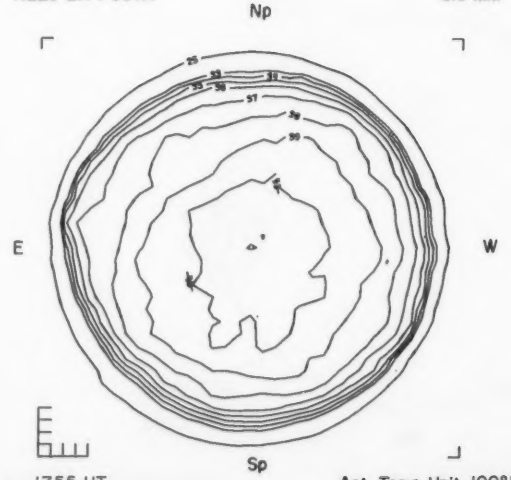
NELC LA POSTA 2.0 CM



2025 UT

Ant. Temp. Unit 100°K

NELC LA POSTA 8.6 MM



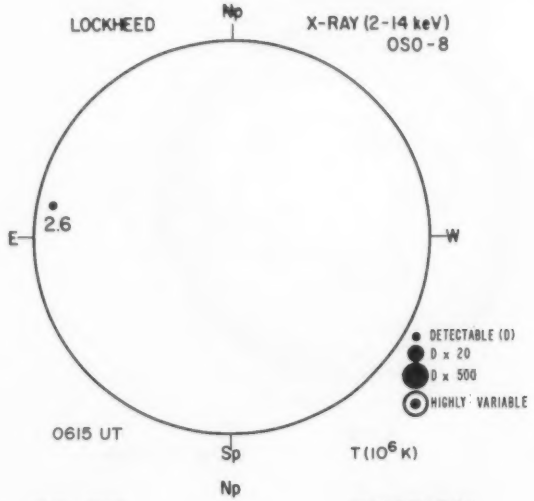
1755 UT

Ant. Temp. Unit 100°K

APRIL 10, 1976 (P =-26.29, B_o =-5.95, L_o =271.13)

LOCKHEED

X-RAY (2-14 keV)
OSO-8



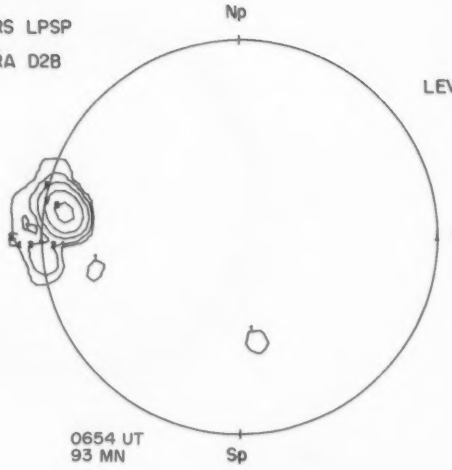
KITT PEAK

MAGNETOGRAM
Bright - Plus
Dark - Minus

CNRS LPSP
AURA D2B

FE XV
284 A

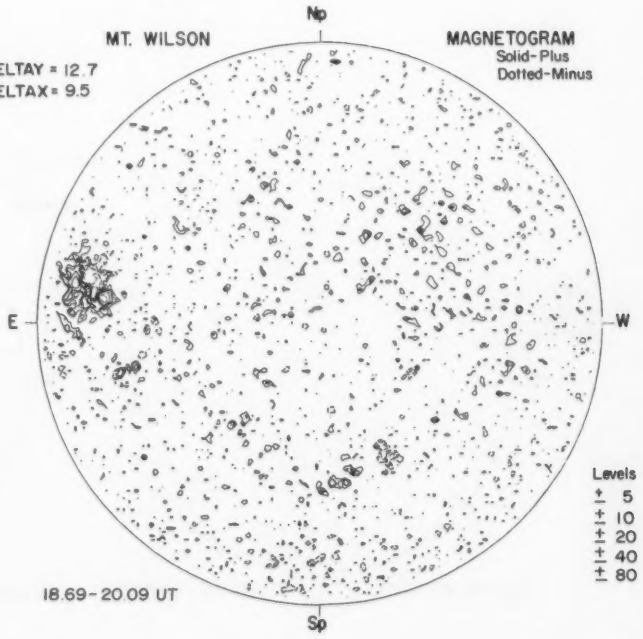
LEVEL 0=20
1=28
2=40
3=56
4=80
5=113
6=160
7=226
8=320
9=452
10=640



MT. WILSON

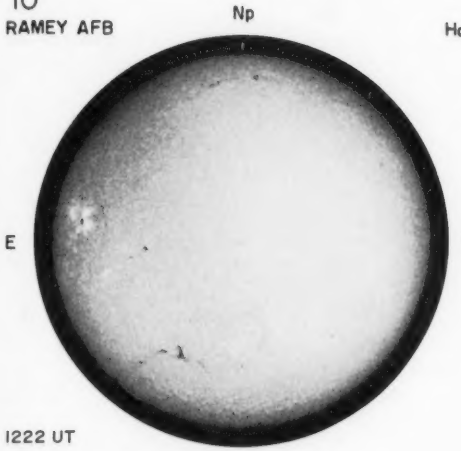
MAGNETOGRAM
Solid - Plus
Dotted - Minus

DELTAY = 12.7
DELTAX = 9.5



10

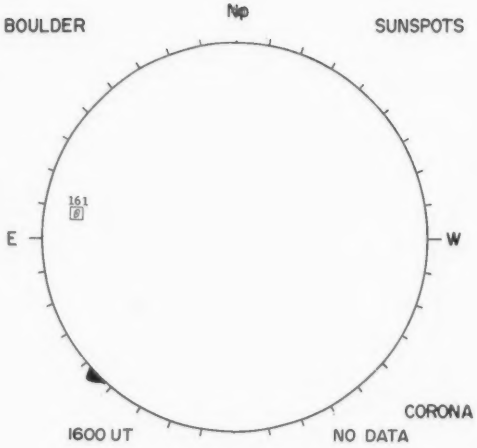
RAMEY AFB



1222 UT

Hα

BOULDER



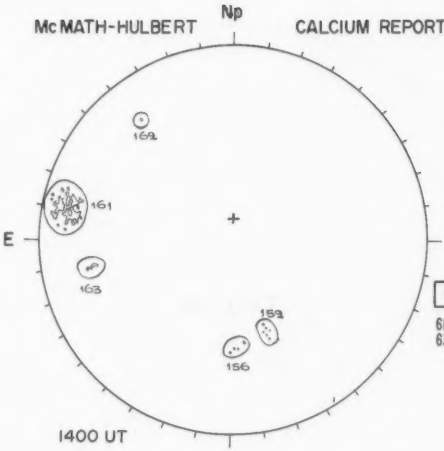
1600 UT

SUNSPOTS

CORONA

NO DATA

McMATH-HULBERT



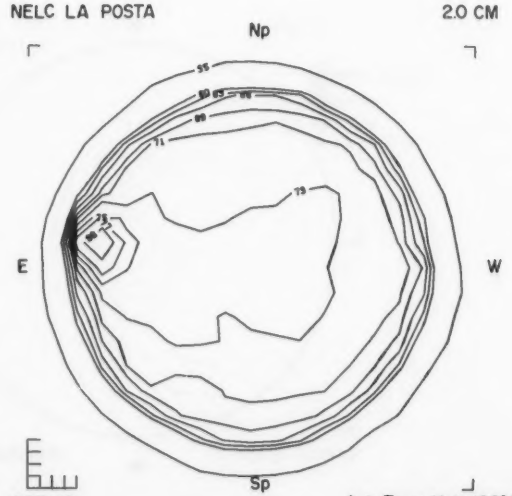
1400 UT

CALCIUM REPORT

	GOOD	M
61	2700	3.0
63	0300	2.5

NELC LA POSTA

2.0 CM

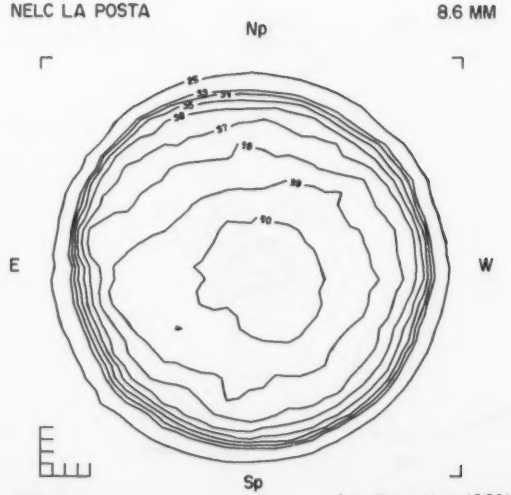


1857 UT

Ant. Temp. Unit 100°K

NELC LA POSTA

8.6 MM



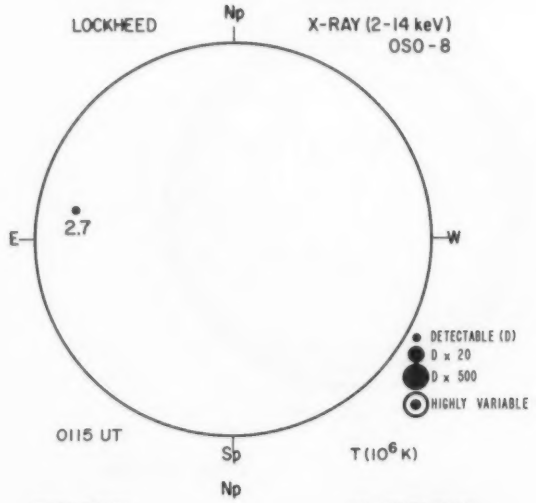
1723 UT

Ant. Temp. Unit 100°K

APRIL 11, 1976 (P =-26.26, B_o =-5.87, L_o =257.93)

LOCKHEED

X-RAY (2-14 keV)
OSO-8



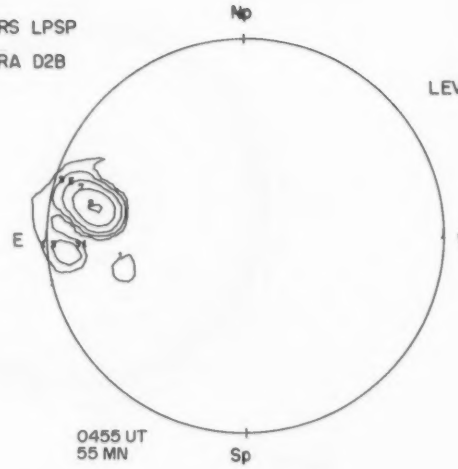
KITT PEAK

MAGNETOGRAM
Bright - Plus
Dark - Minus

CNRS LPSP
AURA D2B

FE XV
284 A

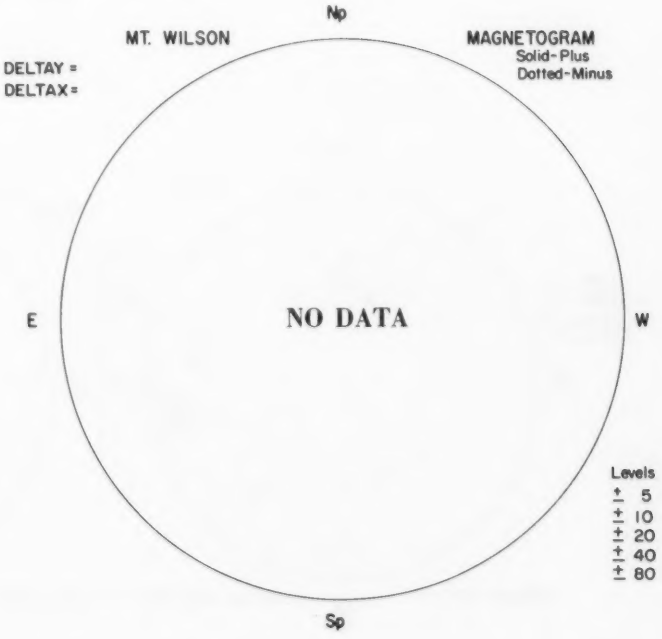
LEVEL 0=20
1=28
2=40
3=56
4=80
5=113
6=160
7=226
8=320
9=452
10=640

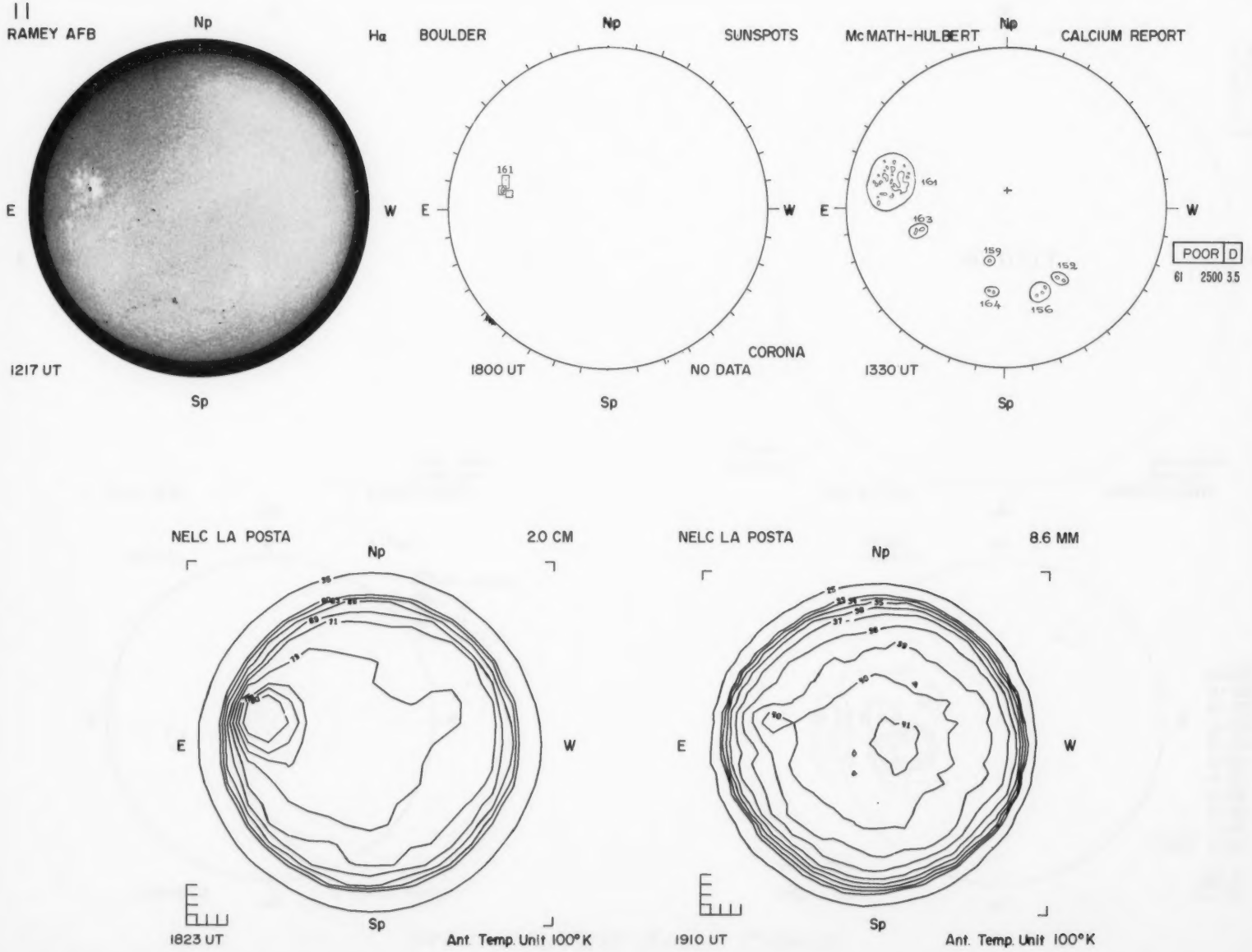


MT. WILSON

MAGNETOGRAM
Solid - Plus
Dotted - Minus

DELTAY =
DELTAX =

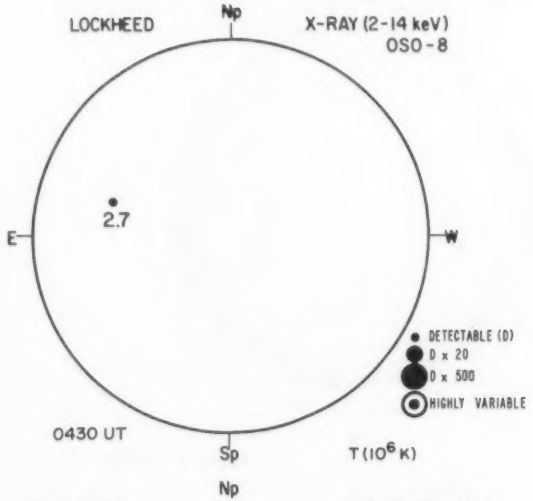



RAMEY AFB
Np
Hα
E
W
Sp
1217 UT
BOULDER
SUNSPOTS
161
1800 UT
CORONA
NO DATA
McMATH-HULBERT
CALCIUM REPORT
161
163
159
152
164
156
1330 UT
POOR D
61 2500 3.5
NELC LA POSTA
2.0 CM
1823 UT
Ant. Temp. Unit 100°K
NELC LA POSTA
8.6 MM
1910 UT
Ant. Temp. Unit 100°K

APRIL 12, 1976 (P =-26.23, B_0 =-5.80, L_0 =244.73)

LOCKHEED

X-RAY (2-14 keV)
OSO-8



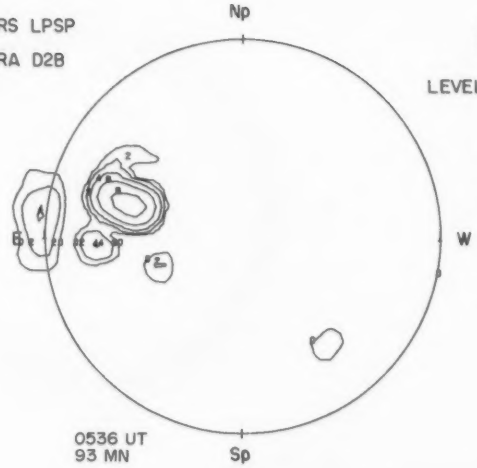
KITT PEAK

MAGNETOGRAM
Bright - Plus
Dark - Minus

CNRS LPSP
AURA D2B

FE XV
284 A

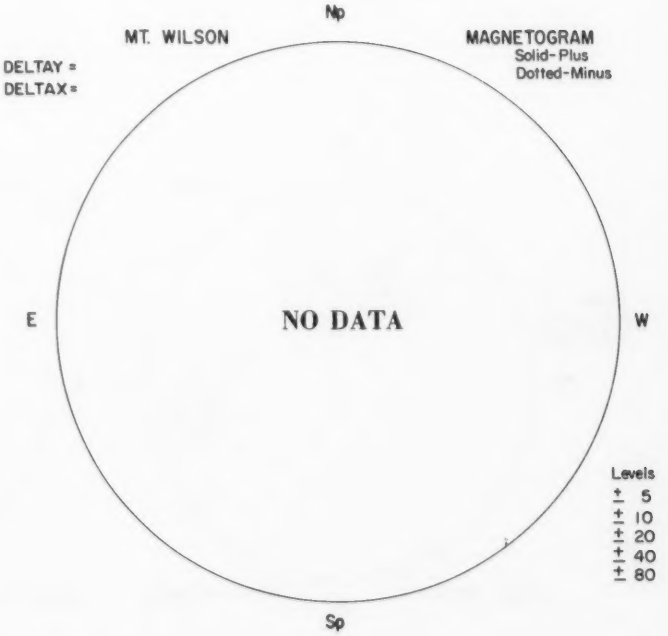
LEVEL 0=20
1=28
2=40
3=56
4=80
5=113
6=160
7=226
8=320
9=452
10=640



MT. WILSON

MAGNETOGRAM
Solid - Plus
Dotted - Minus

DELTAY =
DELTAX =



12

RAMEY AFB

Np

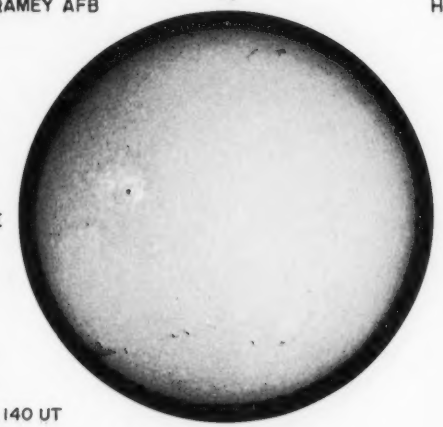
Hα

E

W

Sp

1140 UT



BOULDER

Np

SUNSPOTS

E

W

161

Sp

1900 UT

CORONA

NO DATA

McMATH-HULBERT

Np

CALCIUM REPORT

E

W

161

166

163

165

164

156

152

FAIR D

61 3000 3.5

Sp

1200 UT

NELC LA POSTA

2.0 CM

Np

E

W

Sp

1700 UT

Ant. Temp. Unit 100°K

NELC LA POSTA

8.6 MM

Np

NO DATA

E

WEATHER

W

Sp

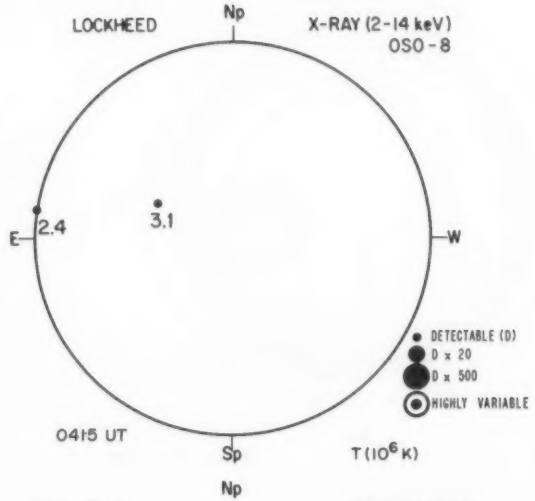
----UT

Ant. Temp. Unit 100°K

APRIL 13, 1976 (P =-26.18, B_o =-5.73, L_o =231.52)

LOCKHEED

X-RAY (2-14 keV)
OSO-8



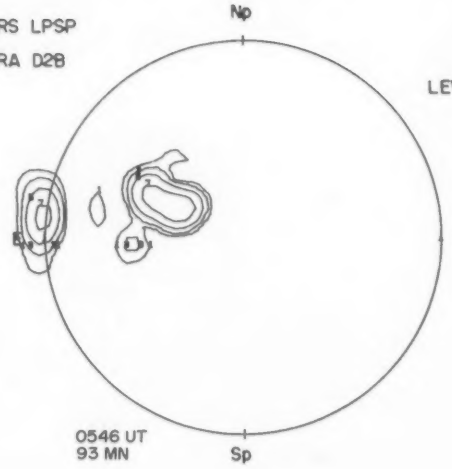
KITT PEAK

MAGNETOGRAM
Bright - Plus
Dark - Minus

CNRS LPSP
AURA D2B

FE XV
284 A

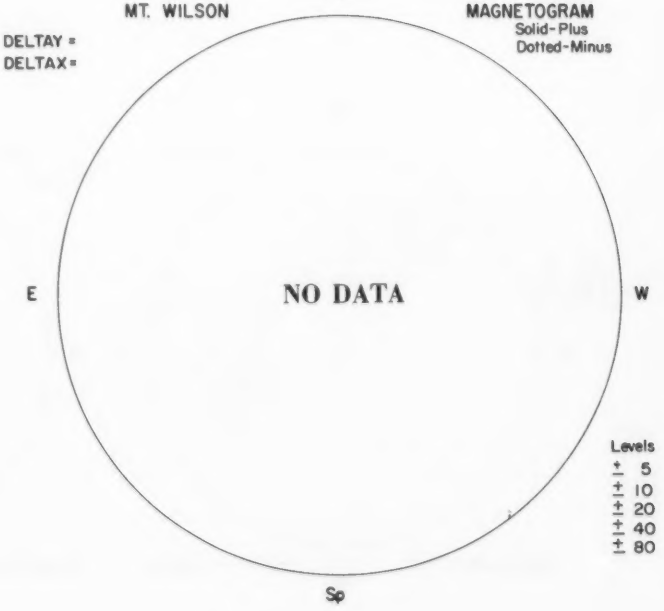
LEVEL 0=20
1=28
2=40
3=56
4=80
5=113
6=160
7=226
8=320
9=452
10=640



MT. WILSON

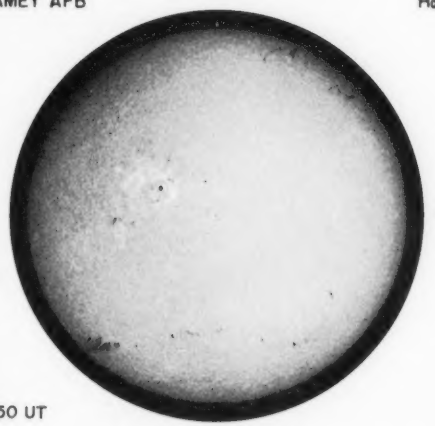
MAGNETOGRAM
Solid - Plus
Dotted - Minus

DELTAY =
DELTAX =



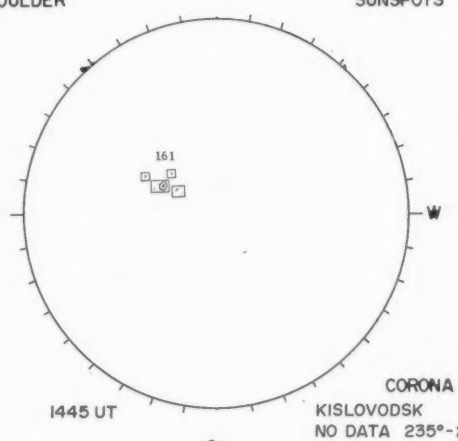
13

RAMEY AFB



1150 UT

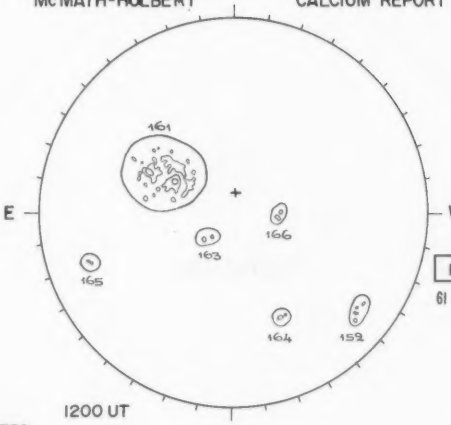
Hα BOULDER



1445 UT

SUNSPOTS

McMATH-HULBERT



1200 UT

CALCIUM REPORT

FAIR D

61 3200 3.0

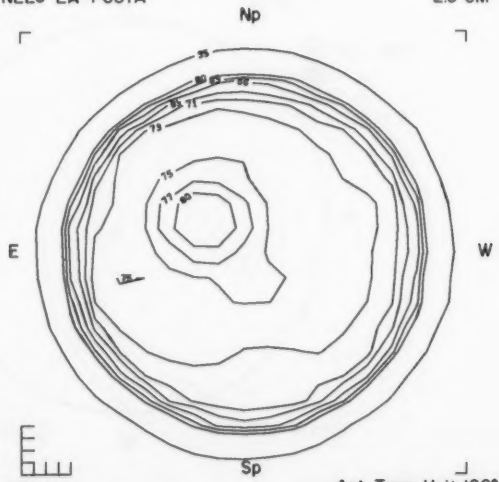
CORONA

KISLOVODSK

NO DATA 235°-275°

NELC LA POSTA

2.0 CM



2134 UT

Ant. Temp. Unit 100°K

NELC LA POSTA

8.6 MM

NO DATA

WEATHER

----UT

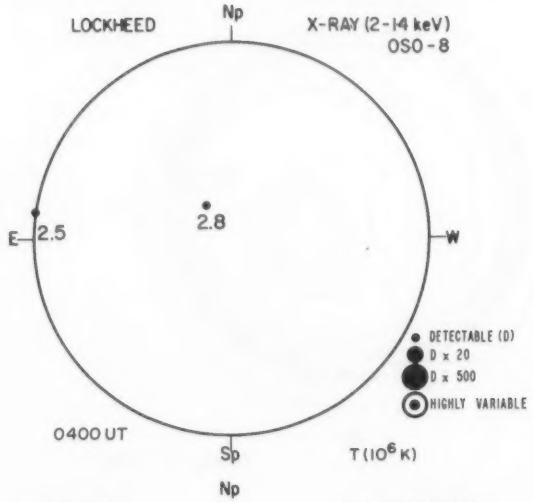
Ant. Temp. Unit 100°K

51
Apr 76

APRIL 14, 1976 (P =-26.13, B_0 =-5.65, L_0 =218.32)

LOCKHEED

X-RAY (2-14 keV)
OSO-8

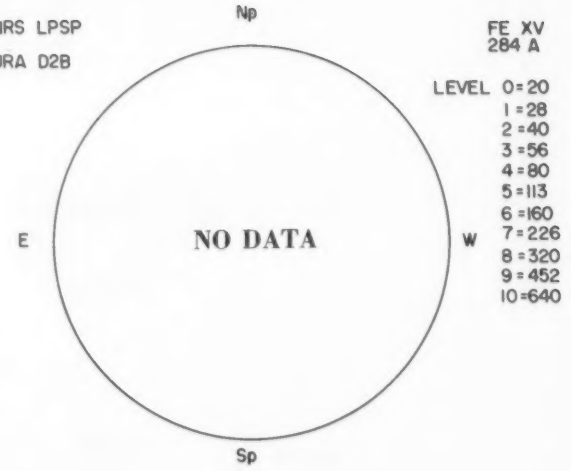


KITT PEAK

MAGNETOGRAM
Bright - Plus
Dark - Minus

CNRS LPSP
AURA D2B

FE XV
284 A

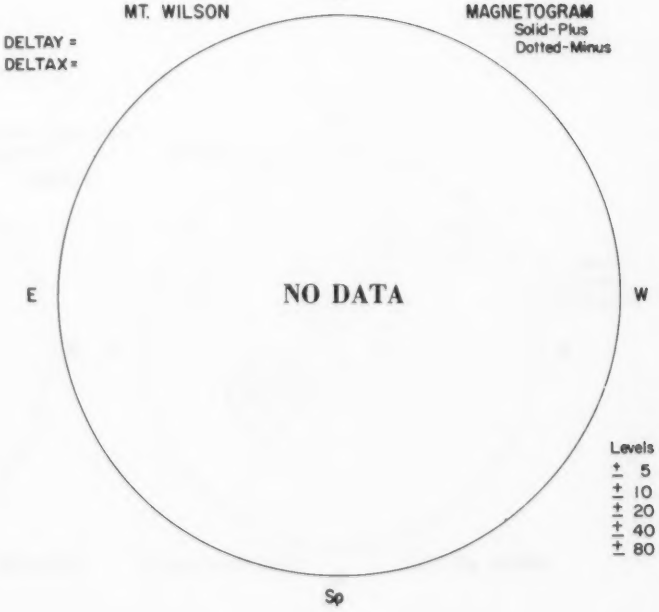


LEVEL 0=20
1=28
2=40
3=56
4=80
5=113
6=160
7=226
8=320
9=452
10=640

MT. WILSON

MAGNETOGRAM
Solid - Plus
Dotted - Minus

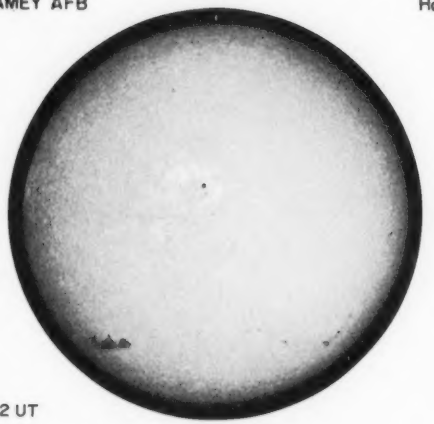
DELTAY =
DELTAX =



Levels
± 5
± 10
± 20
± 40
± 80

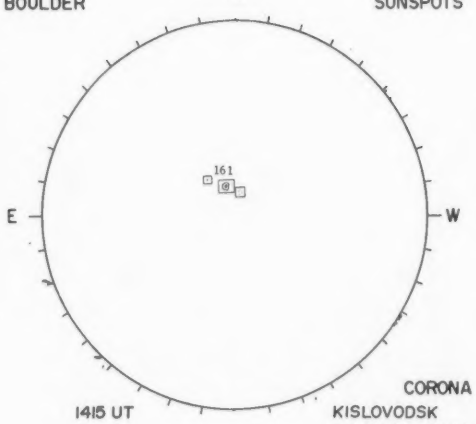
14

RAMEY AFB



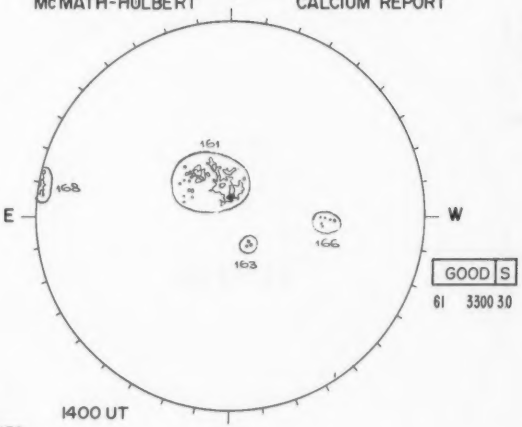
1212 UT

Hα · BOULDER



1415 UT

SUNSPOTS



1400 UT

McMATH-HULBERT

CALCIUM REPORT

GOOD | S

61 3300 30

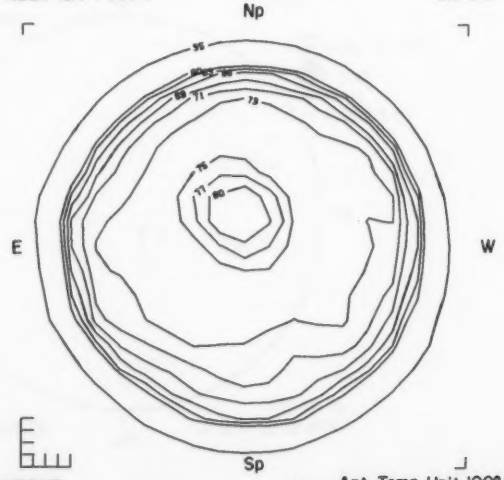
CORONA

KISLOVODSK

NO DATA 260°, 315°

NELC LA POSTA

2.0 CM



1636 UT

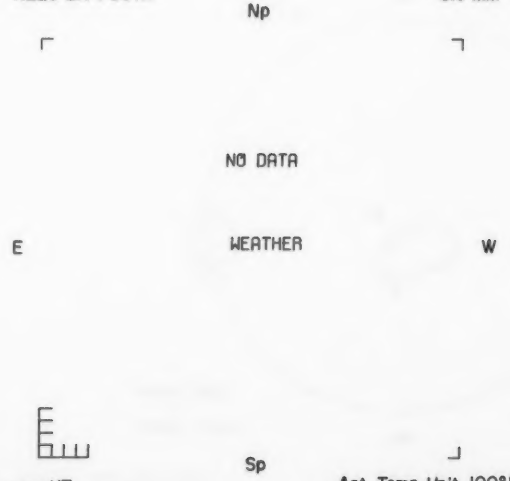
Ant. Temp. Unit 100° K

NELC LA POSTA

8.6 MM

NO DATA

WEATHER



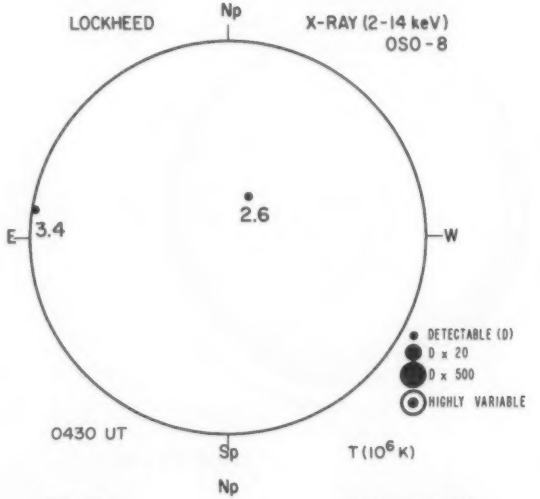
----UT

Ant. Temp. Unit 100° K

APRIL 15, 1976 (P =-26.08, B_0 =-5.57, L_0 =205.12)

LOCKHEED

X-RAY (2-14 keV)
OSO-8



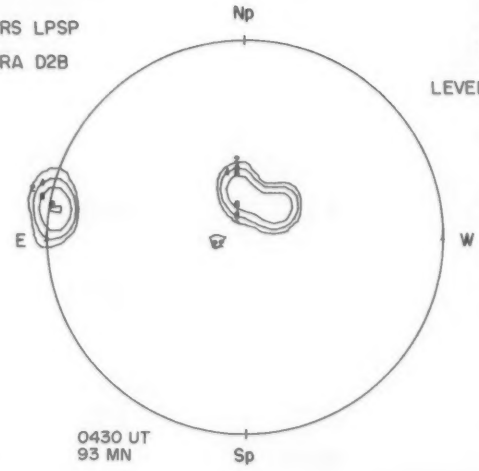
KITT PEAK

MAGNETOGRAM
Bright - Plus
Dark - Minus

CNRS LPSP
AURA D2B

FE XV
284 A

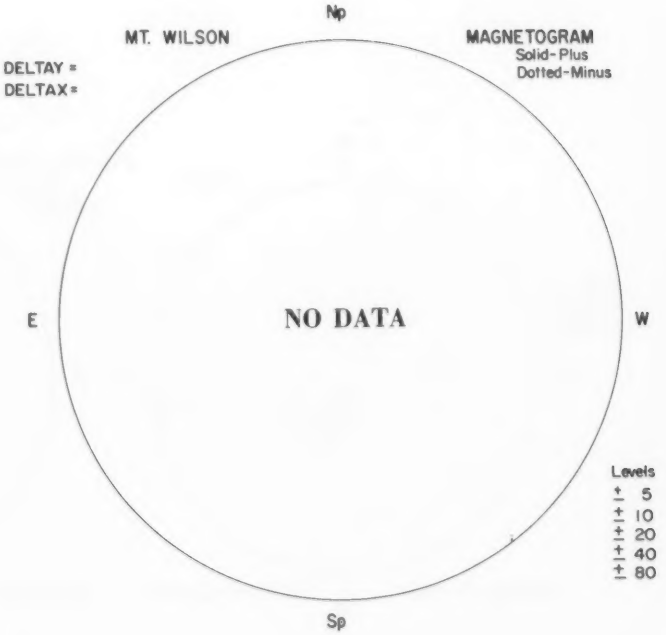
LEVEL 0=20
1=28
2=40
3=56
4=80
5=113
6=160
7=226
8=320
9=452
10=640



MT. WILSON

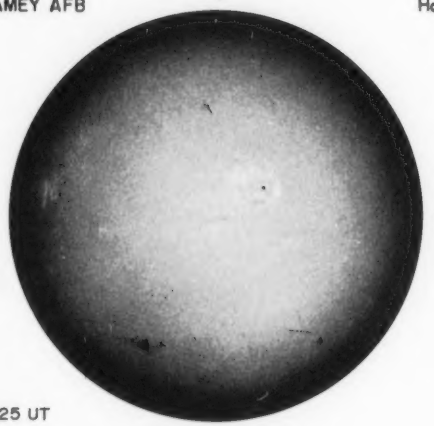
MAGNETOGRAM
Solid - Plus
Dotted - Minus

DELTAY =
DELTAX =



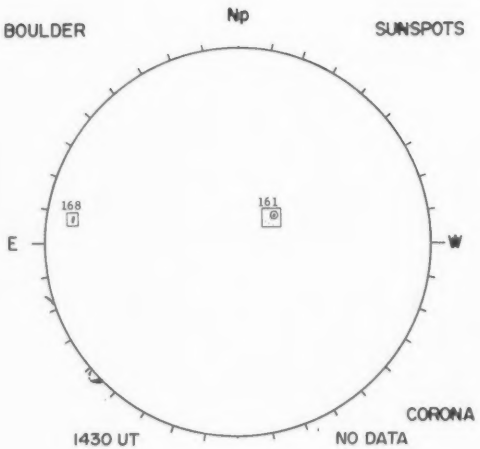
15

RAMEY AFB



1925 UT

BOULDER SUNSPOTS

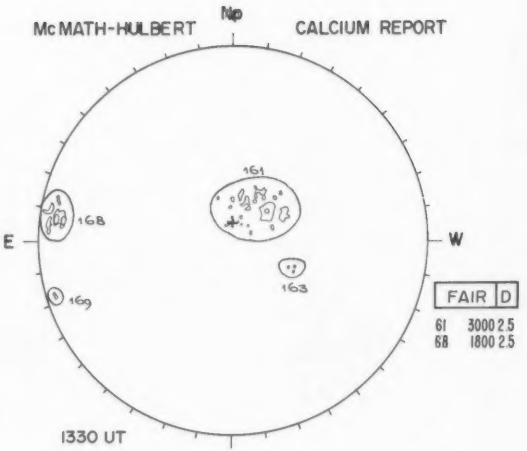


1430 UT

CORONA

NO DATA

McMATH-HULBERT CALCIUM REPORT



1330 UT

FAIR	D
61	3000 2.5
68	1800 2.5

NELC LA POSTA

NO DATA

WEATHER

----UT

2.0 CM

NO DATA

WEATHER

Ant. Temp. Unit 100°K

NELC LA POSTA

NO DATA

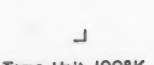
WEATHER

----UT

8.6 MM

NO DATA

WEATHER

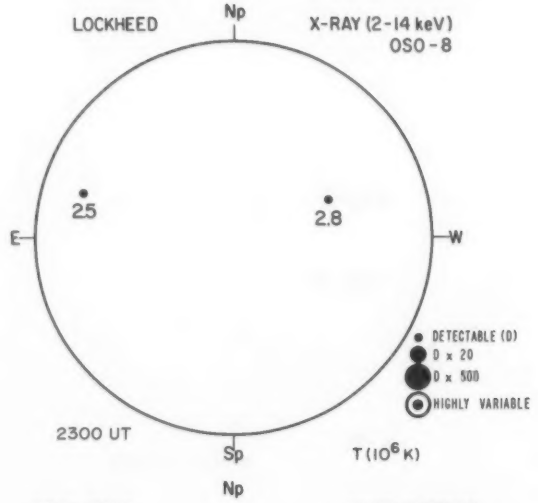


Ant. Temp. Unit 100°K

APRIL 16, 1976 (P=-26.01, B_o=-5.49, L_o=191.91)

LOCKHEED

X-RAY (2-14 keV)
OSO-8



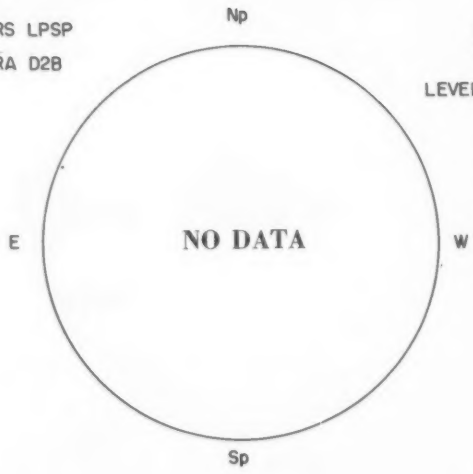
KITT PEAK

MAGNETOGRAM
Bright - Plus
Dark - Minus

CNRS LPSP
AURA D2B

FE XV
284 A

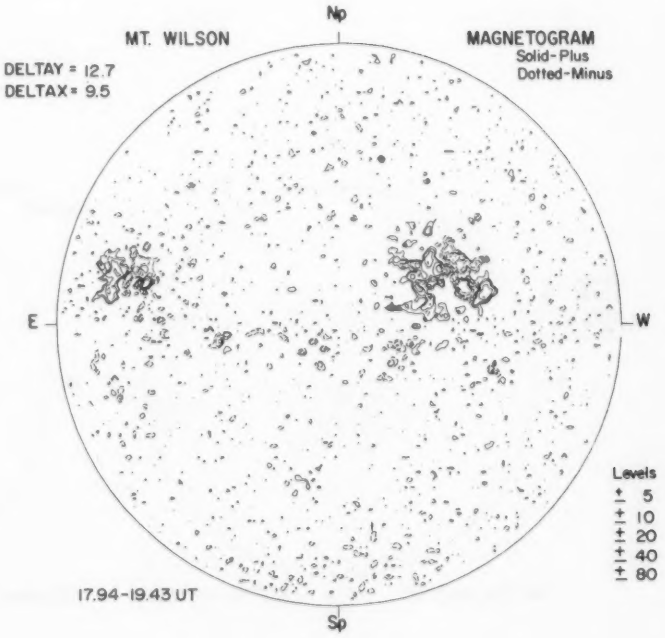
LEVEL 0=20
1=28
2=40
3=56
4=80
5=113
6=160
7=226
8=320
9=452
10=640



MT. WILSON

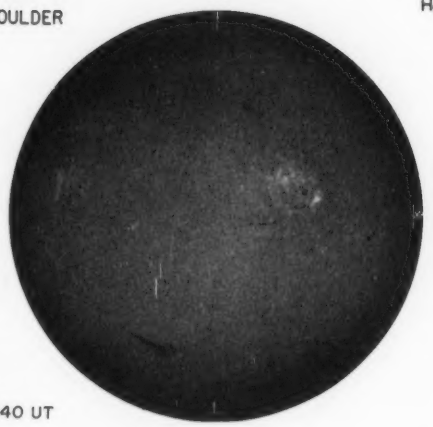
MAGNETOGRAM
Solid-Plus
Dotted-Minus

DELTAY = 12.7
DELTAX = 9.5



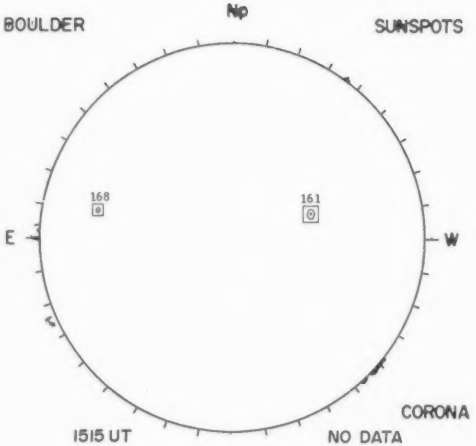
16

BOULDER



1840 UT

Hα BOULDER SUNSPOTS

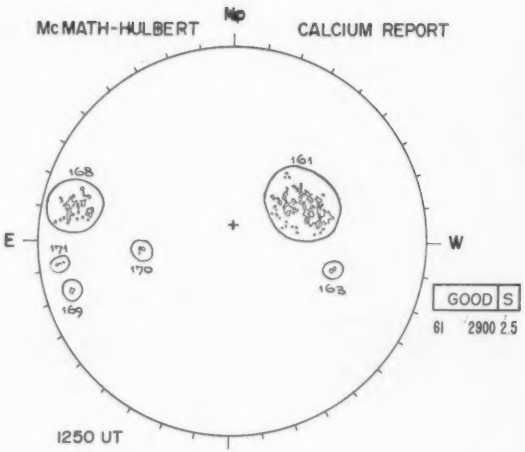


1515 UT

CORONA

NO DATA

McMATH-HULBERT CALCIUM REPORT



1250 UT

GOOD | S

61 2900 2.5

NELC LA POSTA

2.0 CM

NO DATA

E CALIBRATION W

2002 UT

Ant. Temp. Unit 100°K

NELC LA POSTA

8.6 MM

NO DATA

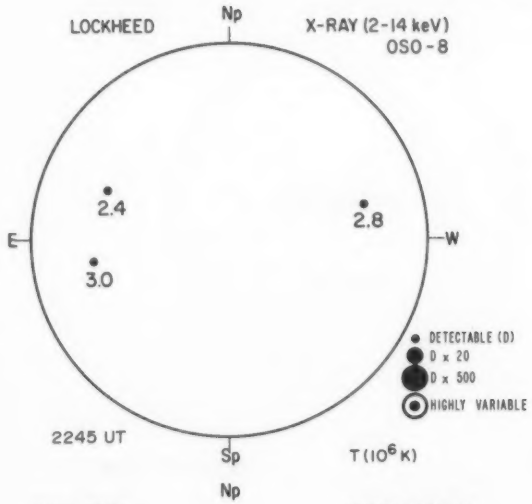
E CLOUDY W

2103 UT

Ant. Temp. Unit 100°K

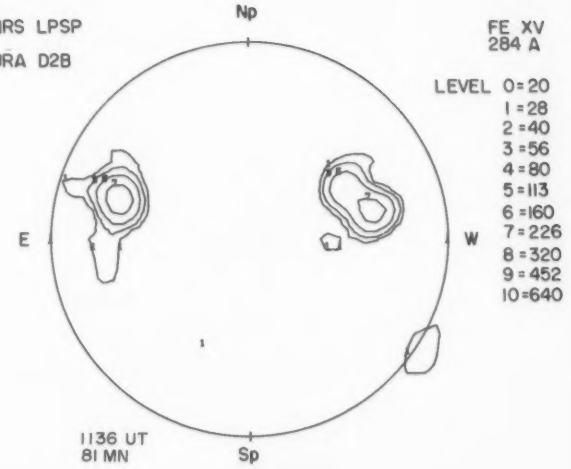
57
Apr 76

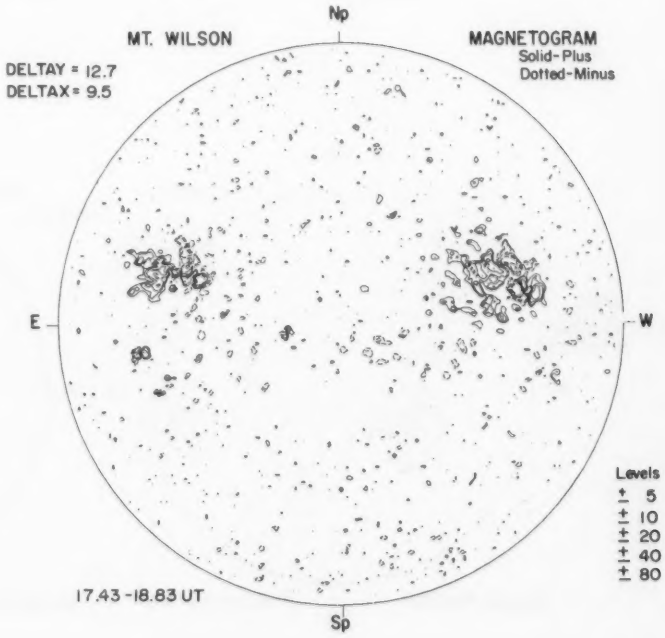
APRIL 17, 1976 (P =25.94, B_0 =5.41, L_0 =178.71)



KITT PEAK

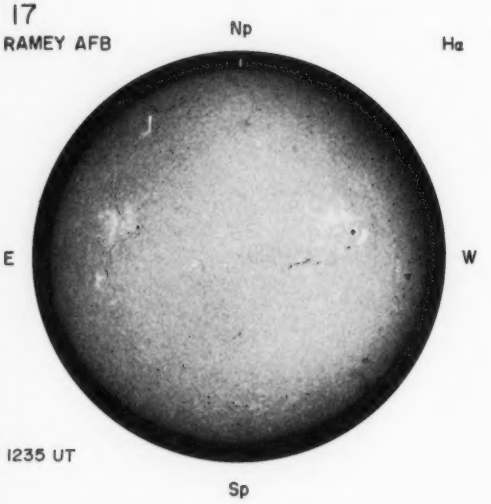
MAGNETOGRAM
Bright - Plus
Dark - Minus





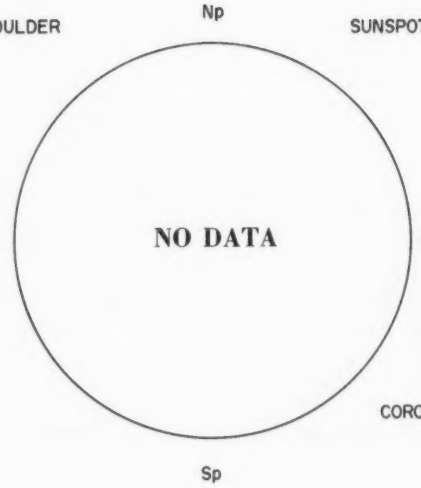
17

RAMEY AFB



1235 UT

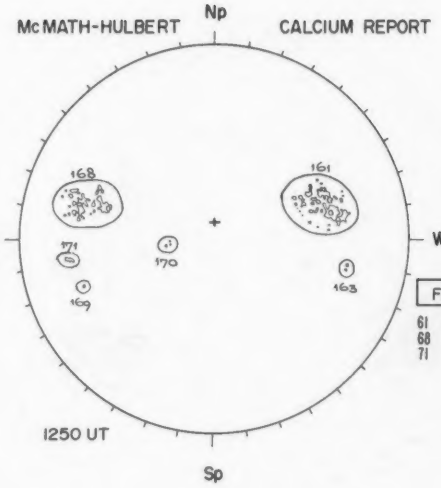
Hα BOULDER



SUNSPOTS

CORONA

McMATH-HULBERT

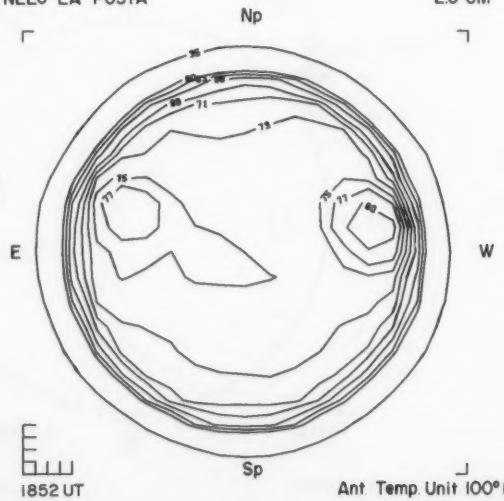


1250 UT

CALCIUM REPORT

	FAIR	M
61	2600	2.5
68	1600	2.5
71	0300	3.0

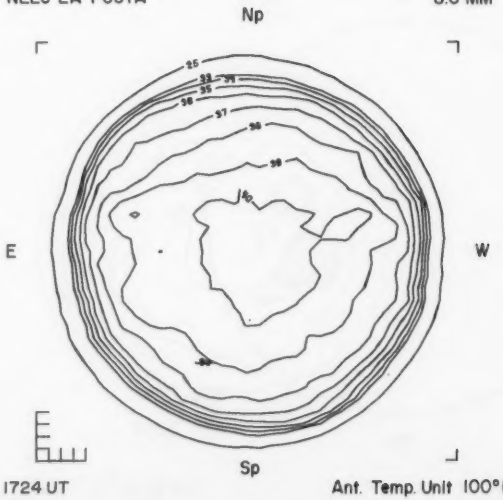
NELC LA POSTA 2.0 CM



1852 UT

Ant. Temp. Unit 100°K

NELC LA POSTA 8.6 MM

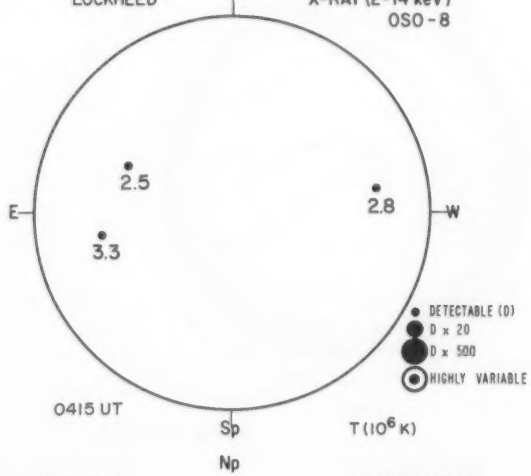


1724 UT

Ant. Temp. Unit 100°K

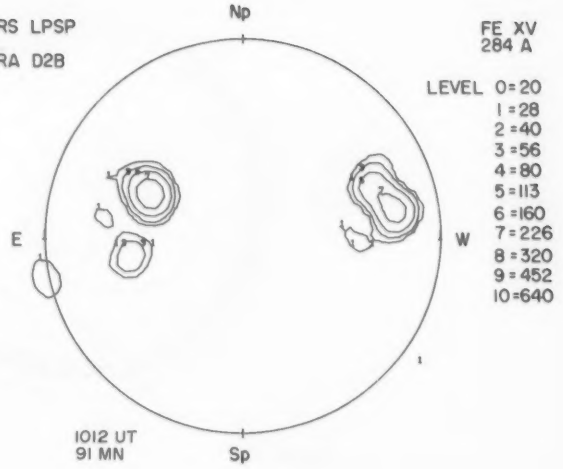
APRIL 18, 1976 (P =-25.86, B_o =-5.33, L_o =165.50)

LOCKHEED
X-RAY (2-14 keV)
OSO-8

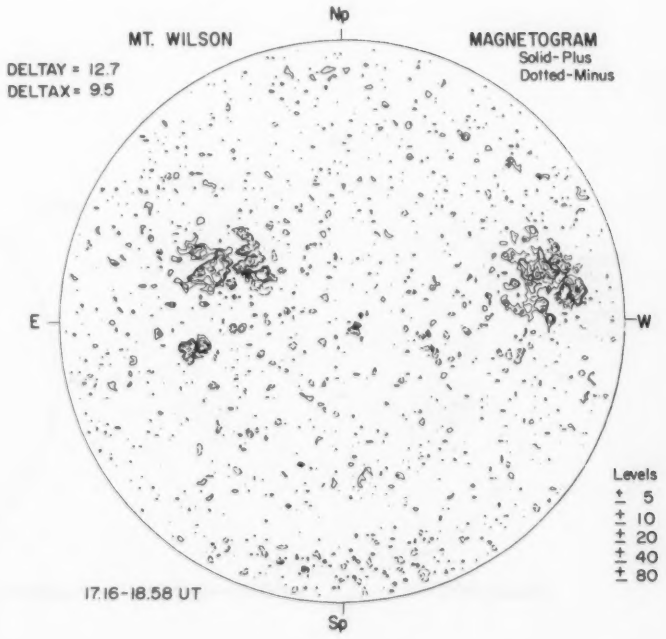


KITT PEAK
MAGNETOGRAM
Bright - Plus
Dark - Minus

CNRS LPSP
AURA D2B
FE XV
284 A

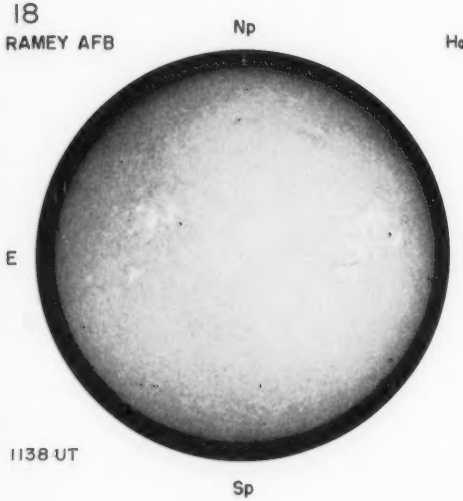


MT. WILSON
MAGNETOGRAM
Solid - Plus
Dotted - Minus



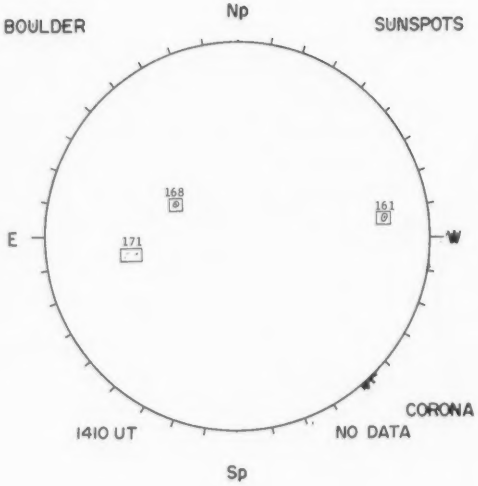
18

RAMEY AFB



1138 UT

Hα BOULDER



1410 UT

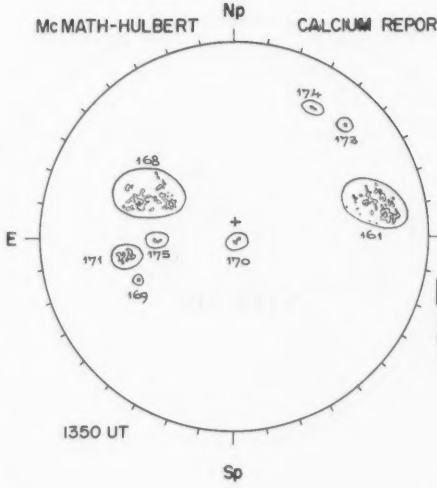
SUNSPOTS

CORONA

NO DATA

McMATH-HULBERT

CALCIUM REPORT

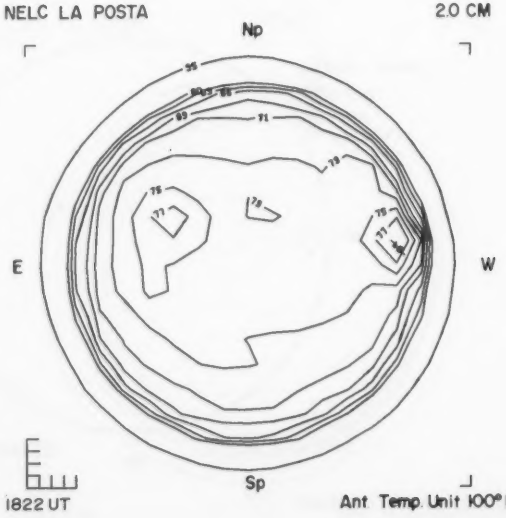


1350 UT

GOOD	M
61	2400 2.5
68	1700 2.5
71	0600 2.5

NELC LA POSTA

2.0 CM

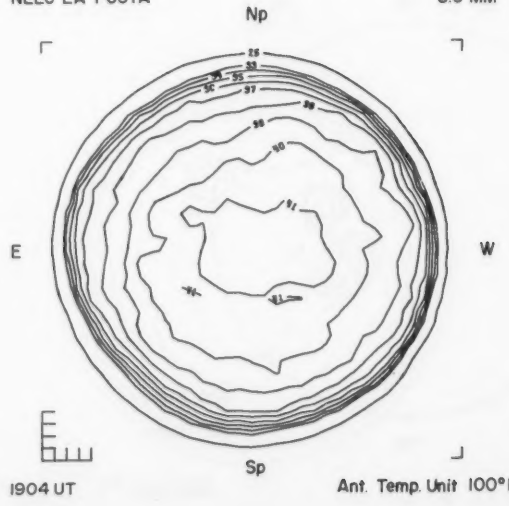


1822 UT

Ant. Temp. Unit 100°K

NELC LA POSTA

8.6 MM



1904 UT

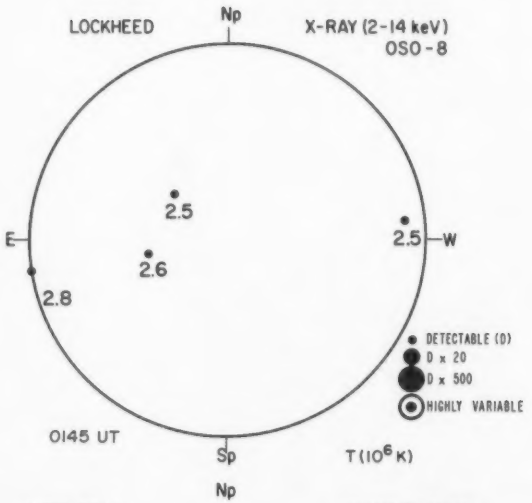
Ant. Temp. Unit 100°K

61
Apr 76

APRIL 19, 1976 (P =-25.77, B_o =-5.24, L_o =152.29)

LOCKHEED

X-RAY (2-14 keV)
OSO-8



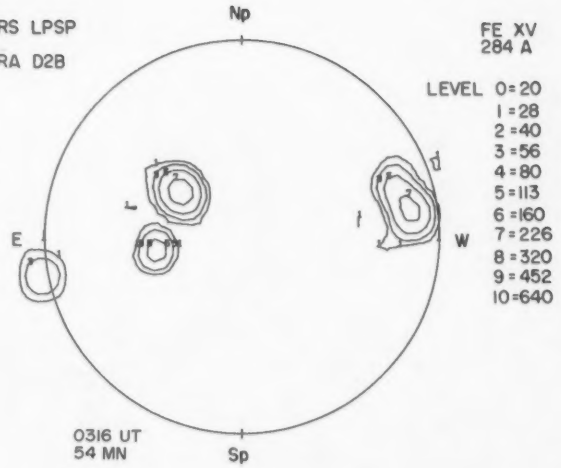
KITT PEAK

MAGNETOGRAM
Bright - Plus
Dark - Minus

CNRS LPSP
AURA D2B

FE XV
284 A

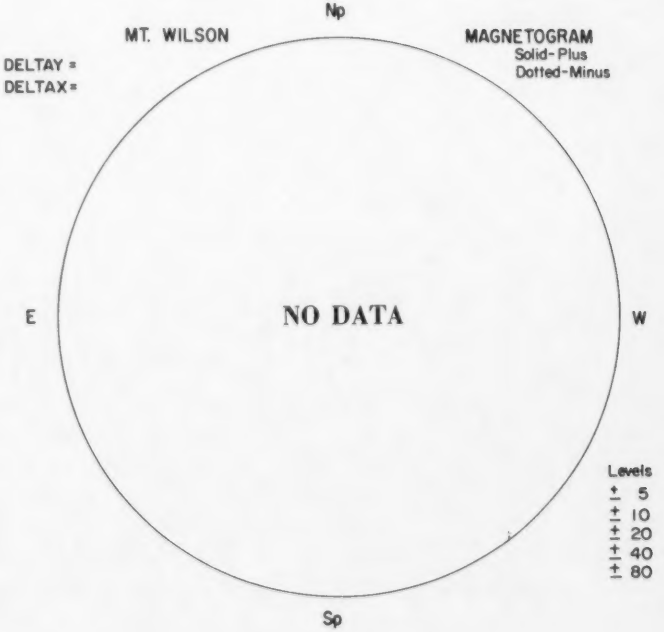
LEVEL 0=20
1=28
2=40
3=56
4=80
5=113
6=160
7=226
8=320
9=452
10=640



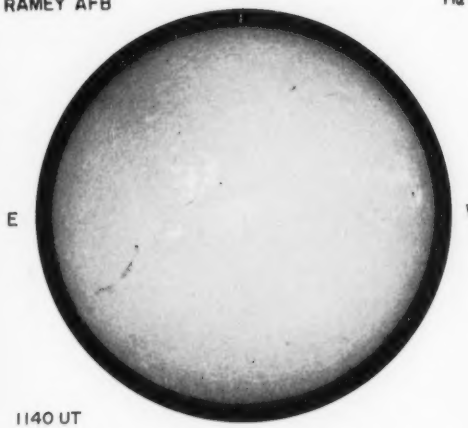
MT. WILSON

MAGNETOGRAM
Solid - Plus
Dotted - Minus

DELTAY =
DELTAX =

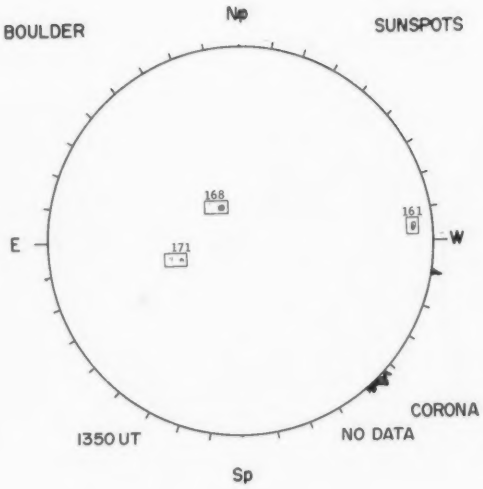


RAMEY AFB



1140 UT

Hα BOULDER



1350 UT

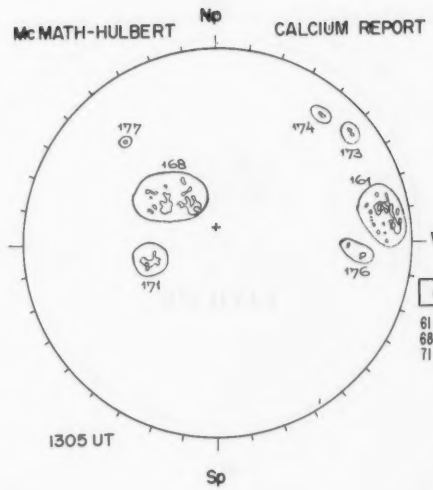
SUNSPOTS

CORONA

NO DATA

Mc MATH-HULBERT

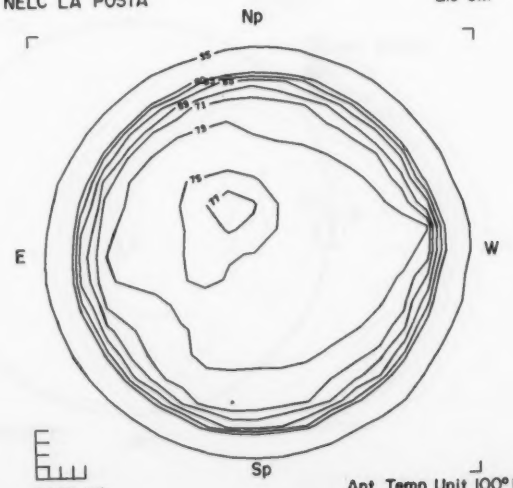
CALCIUM REPORT



1305 UT

GOOD	S
61	2400 3.5
68	2000 2.5
71	0700 2.5

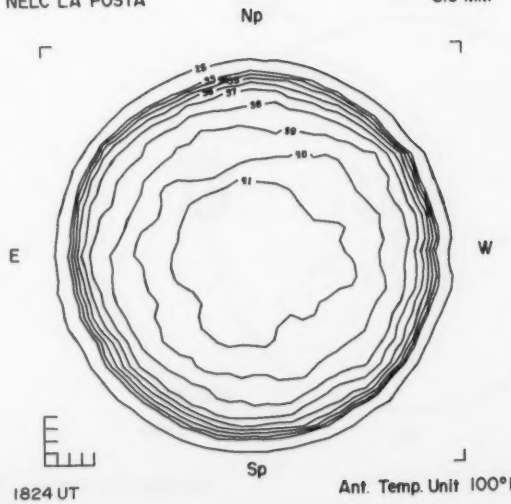
NELC LA POSTA 2.0 CM



2002 UT

Ant. Temp. Unit 100°K

NELC LA POSTA 8.6 MM



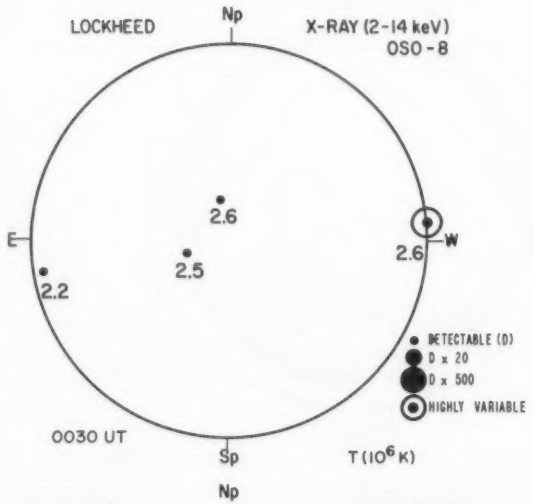
1824 UT

Ant. Temp. Unit 100°K

APRIL 20, 1976 (P =-25.68, B_o =-5.15, L_o =139.08)

LOCKHEED

X-RAY (2-14 keV)
OSO-8



0030 UT

T(10^6 K)

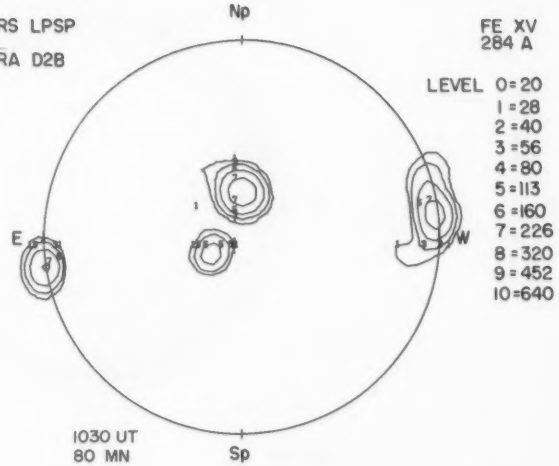
KITT PEAK

MAGNETOGRAM
Bright - Plus
Dark - Minus

CNRS LPSP
AURA D2B

FE XV
284 A

LEVEL 0=20
1=28
2=40
3=56
4=80
5=113
6=160
7=226
8=320
9=452
10=640

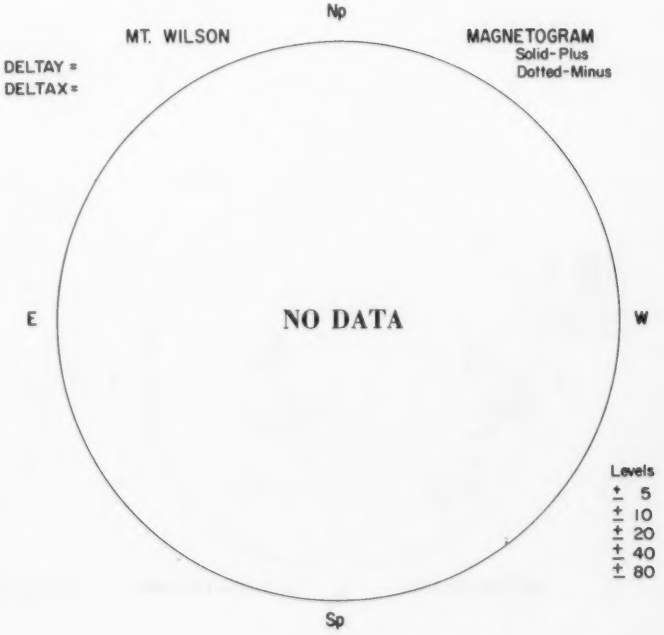


1030 UT
80 MN

MT. WILSON

DELTAY =
DELTAX =

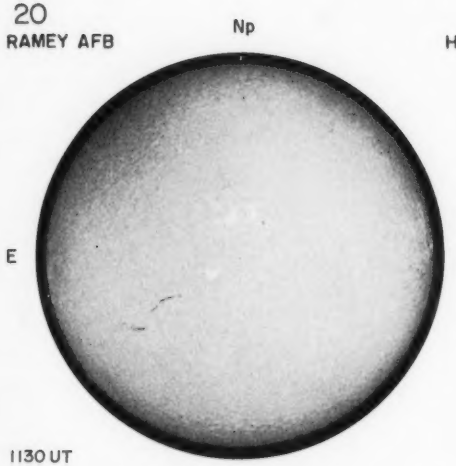
MAGNETOGRAM
Solid - Plus
Dotted - Minus



Levels
± 5
± 10
± 20
± 40
± 80

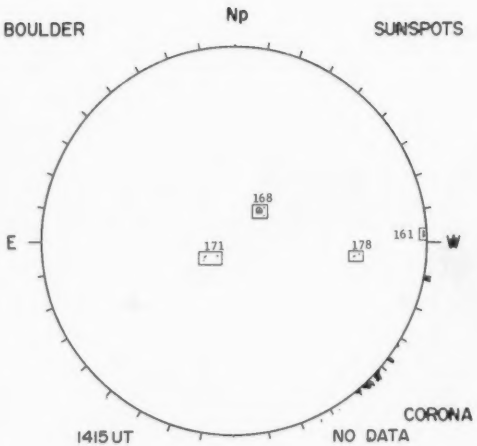
20

RAMEY AFB



1130 UT

Hα BOULDER



1415 UT

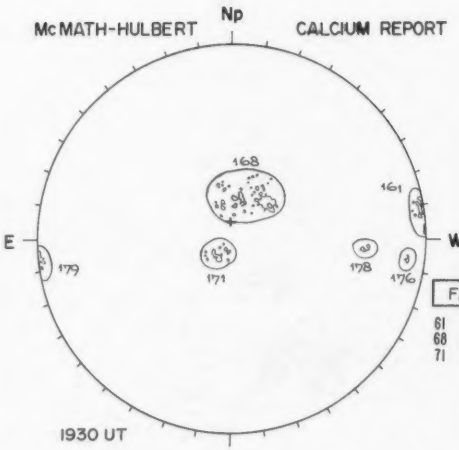
SUNSPOTS

CORONA

NO DATA

McMATH-HULBERT

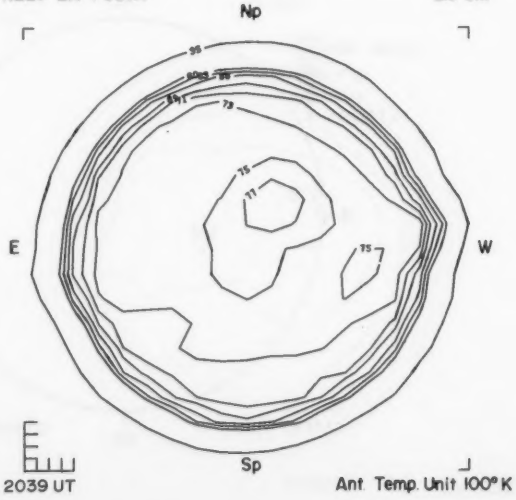
CALCIUM REPORT



1930 UT

FAIR	M
61	2500 3.5
68	1800 2.5
71	0500 2.5

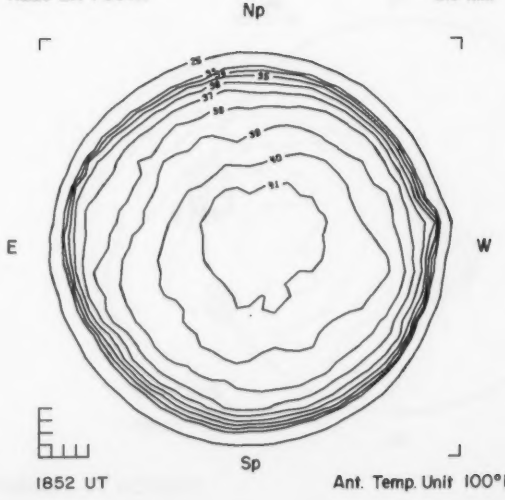
NELC LA POSTA 2.0 CM



2039 UT

Ant. Temp. Unit 100°K

NELC LA POSTA 8.6 MM



1852 UT

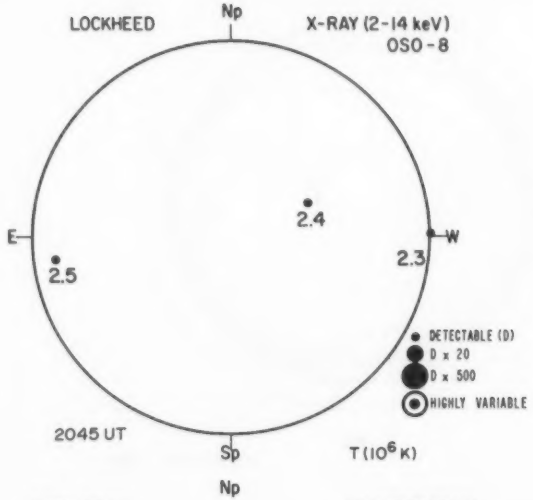
Ant. Temp. Unit 100°K

65
Apr 76

APRIL 21, 1976 (P =-25.58, B_o =-5.07, L_o =125.88)

LOCKHEED

X-RAY (2-14 keV)
OSO-8



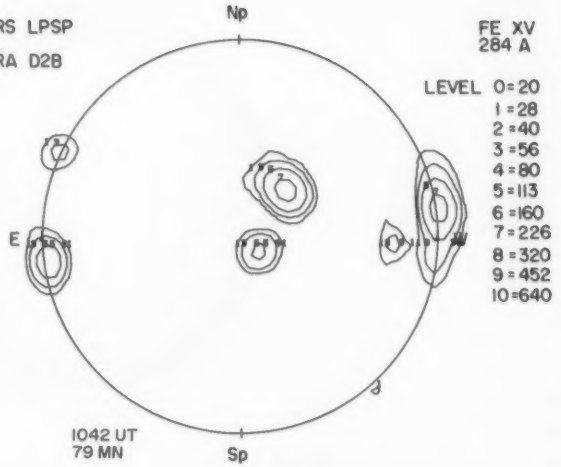
KITT PEAK

MAGNETOGRAM
Bright - Plus
Dark - Minus

CNRS LPSP
AURA D2B

FE XV
284 A

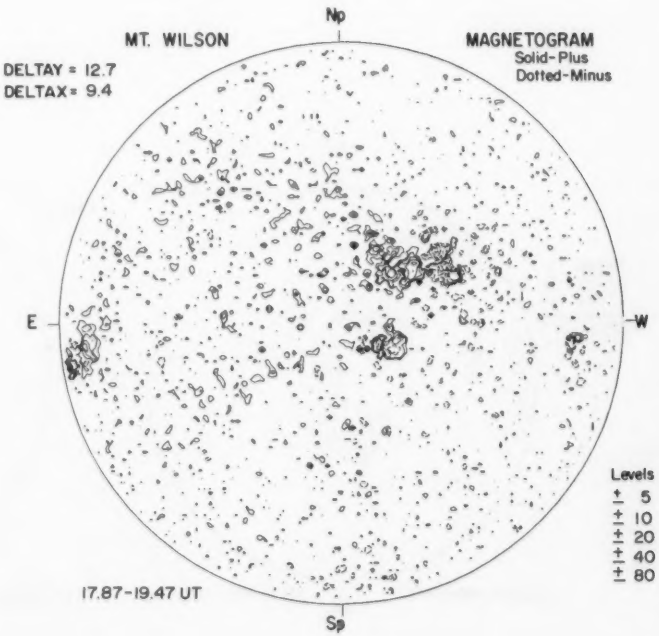
LEVEL 0=20
1=28
2=40
3=56
4=80
5=113
6=160
7=226
8=320
9=452
10=640



MT. WILSON

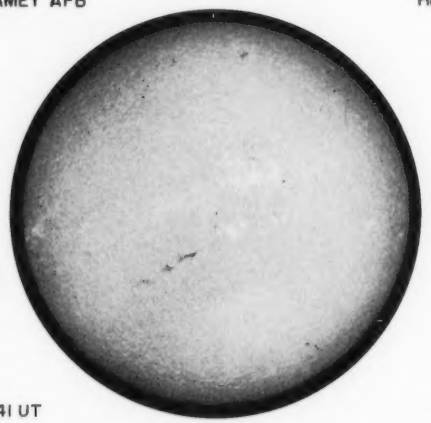
DELTAY = 12.7
DELTAX = 9.4

MAGNETOGRAM
Solid-Plus
Dotted-Minus



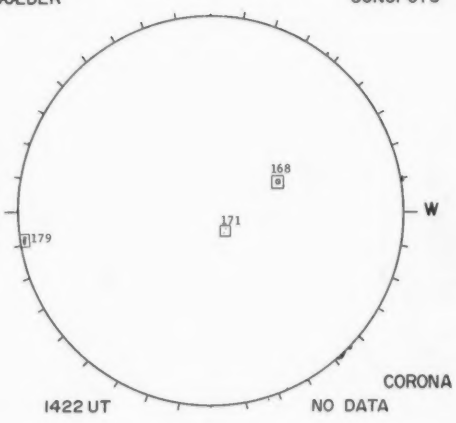
21

RAMEY AFB



1141 UT

Hα BOULDER



1422 UT

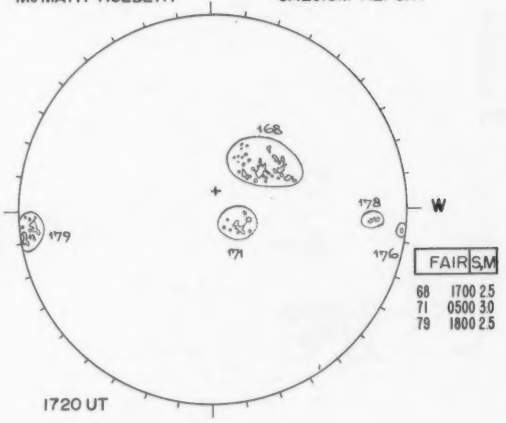
SUNSPOTS

CORONA

NO DATA

McMATH-HULBERT

CALCIUM REPORT

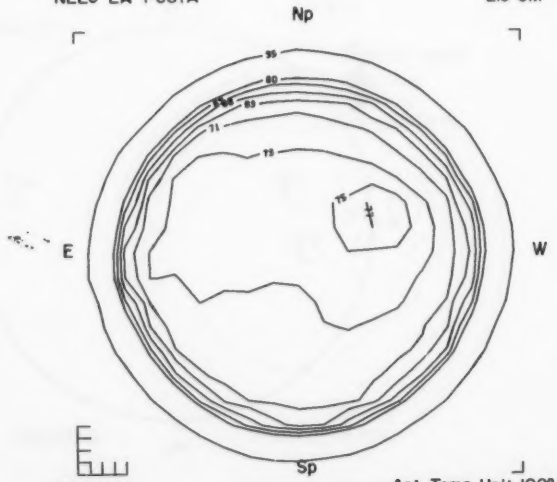


1720 UT

FAIR	S	M
68	1700	2.5
71	0500	3.0
79	1800	2.5

NELC LA POSTA

2.0 CM

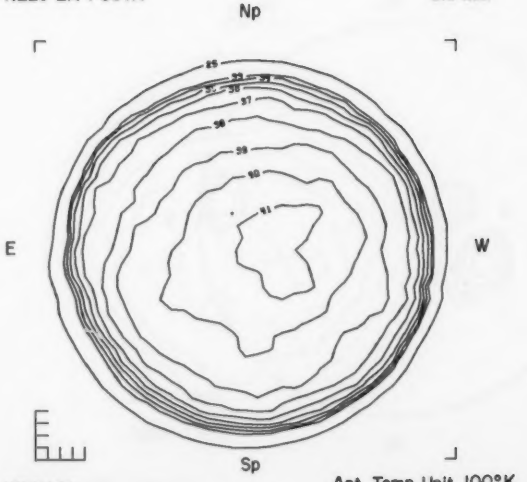


2202 UT

Ant. Temp. Unit 100°K

NELC LA POSTA

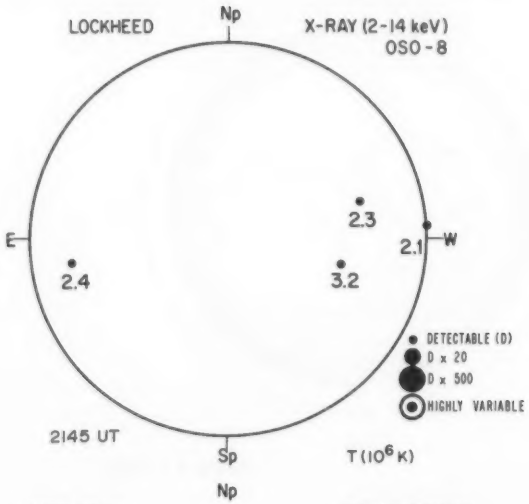
8.6 MM



1829 UT

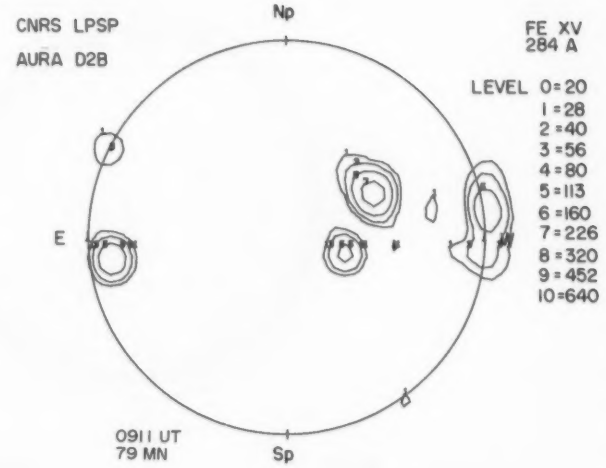
Ant. Temp. Unit 100°K

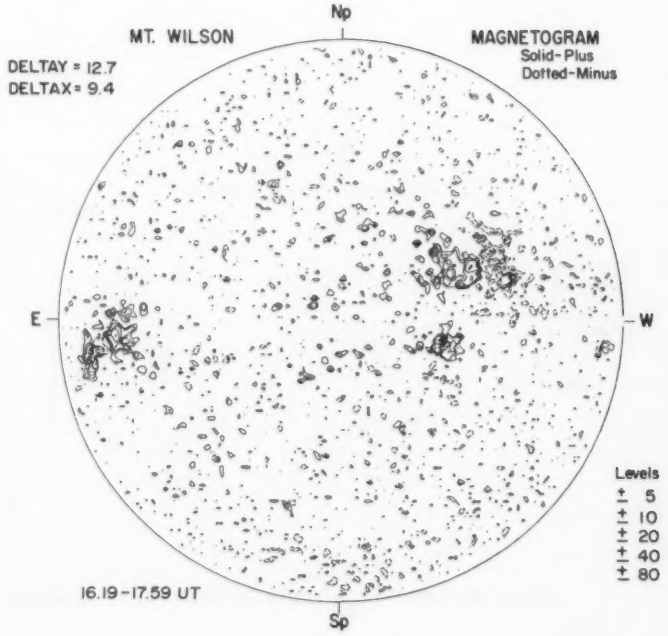
APRIL 22, 1976 (P =-25.47, B_o =-4.98, L_o =112.67)



KITT PEAK

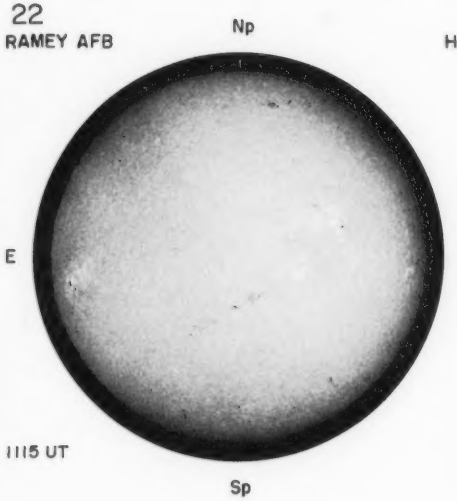
MAGNETOGRAM
Bright- Plus
Dark - Minus





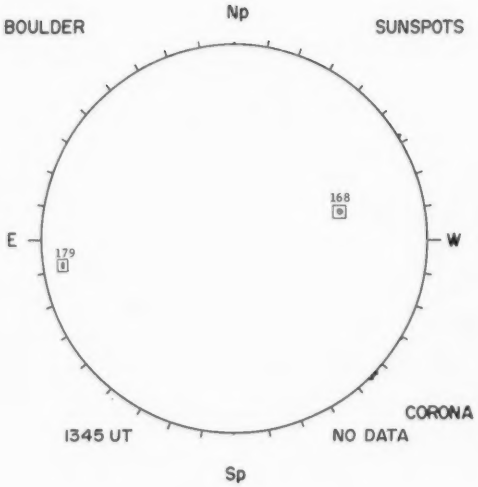
22

RAMEY AFB



1115 UT

Hα BOULDER



1345 UT

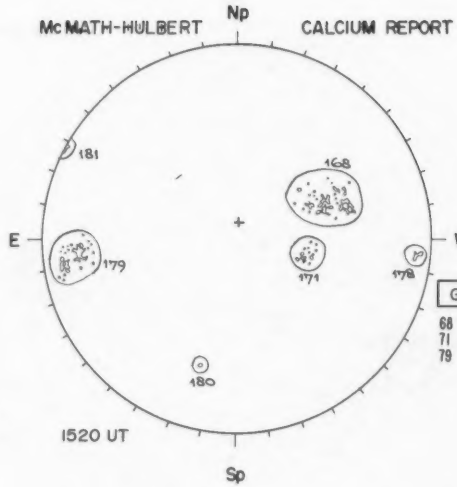
SUNSPOTS

CORONA

NO DATA

McMATH-HULBERT

CALCIUM REPORT

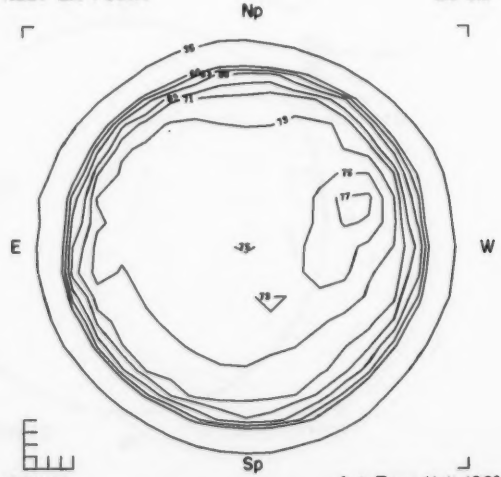


1520 UT

GOOD	M
68	1500 2.5
71	0400 3.0
79	1800 2.5

NELC LA POSTA

2.0 CM

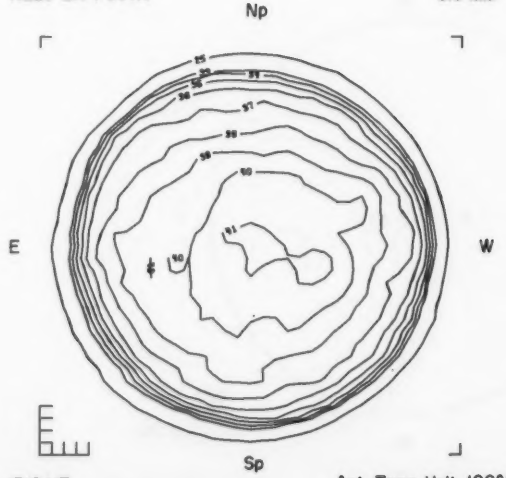


1851 UT

Ant. Temp. Unit 100°K

NELC LA POSTA

8.6 MM



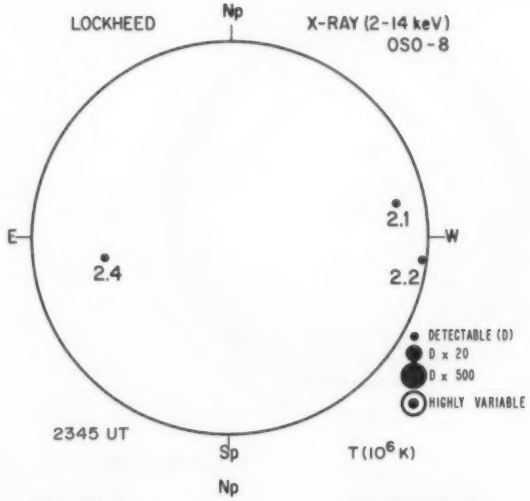
1718 UT

Ant. Temp. Unit 100°K

APRIL 23, 1976 (P =-25.35, B_o =-4.89, L_o =99.46)

LOCKHEED

X-RAY (2-14 keV)
OSO-8

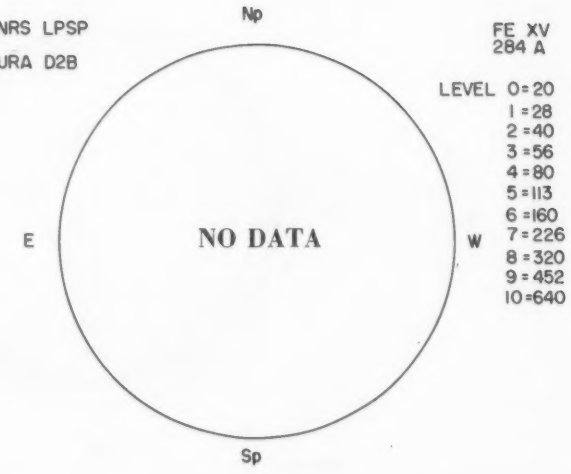


KITT PEAK

MAGNETOGRAM
Bright - Plus
Dark - Minus

CNRS LPSP
AURA D2B

FE XV
284 A

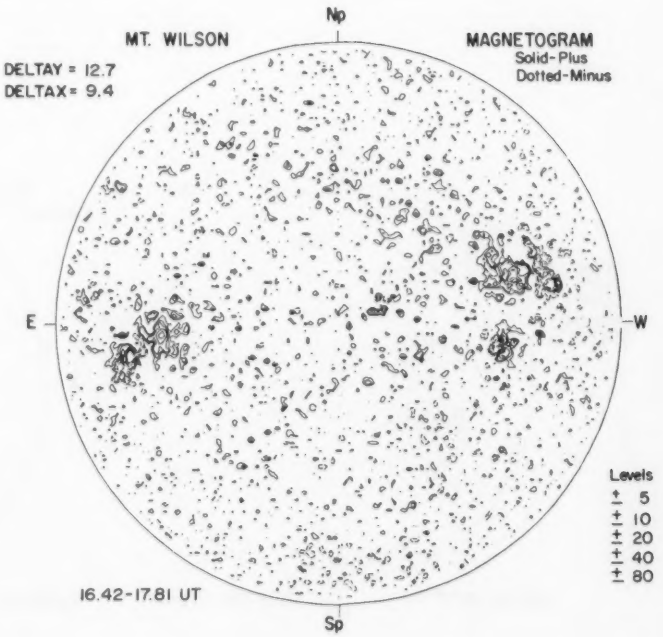


LEVEL 0=20
1=28
2=40
3=56
4=80
5=113
6=160
7=226
8=320
9=452
10=640

MT. WILSON

DELTAY = 12.7
DELTAX = 9.4

MAGNETOGRAM
Solid - Plus
Dotted - Minus

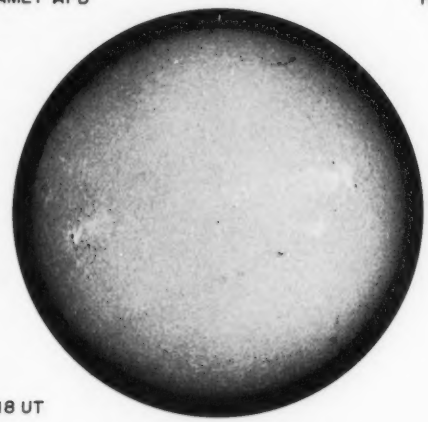


Levels
± 5
± 10
± 20
± 40
± 80

16.42-17.81 UT

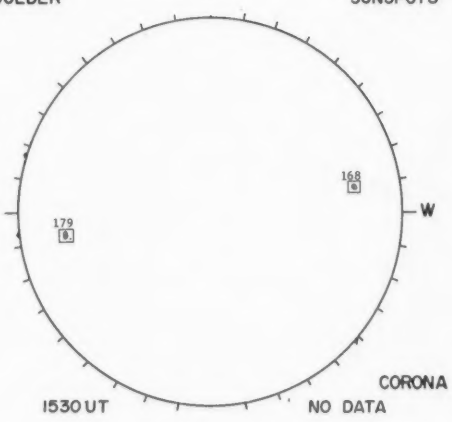
23

RAMEY AFB



1118 UT

Hα BOULDER



1530 UT

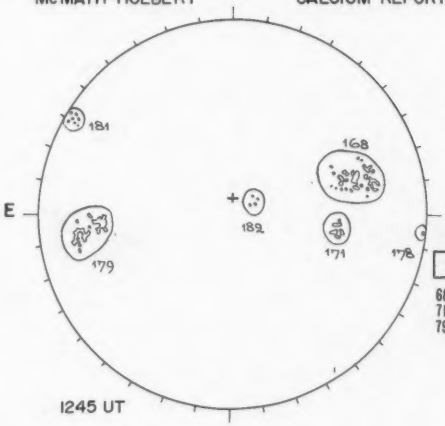
SUNSPOTS

CORONA

NO DATA

McMATH-HULBERT

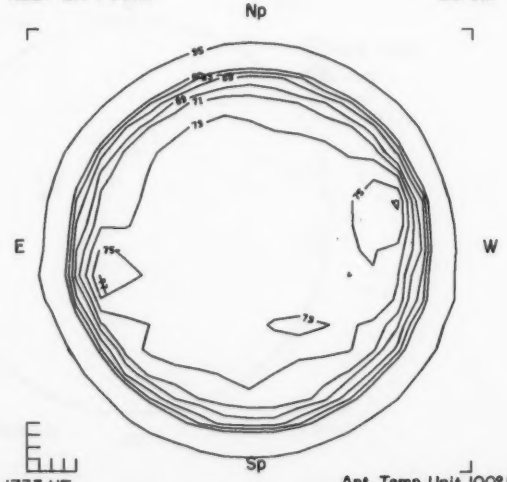
CALCIUM REPORT



1245 UT

GOOD	S
68	1600 3.0
71	0500 3.0
79	1800 3.0

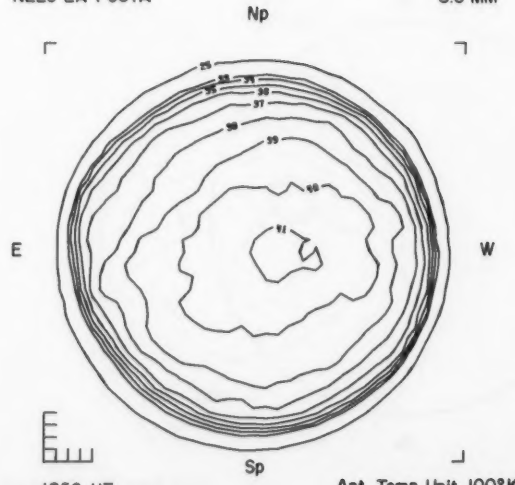
NELC LA POSTA 2.0 CM



1733 UT

Ant. Temp. Unit 100°K

NELC LA POSTA 8.6 MM



1856 UT

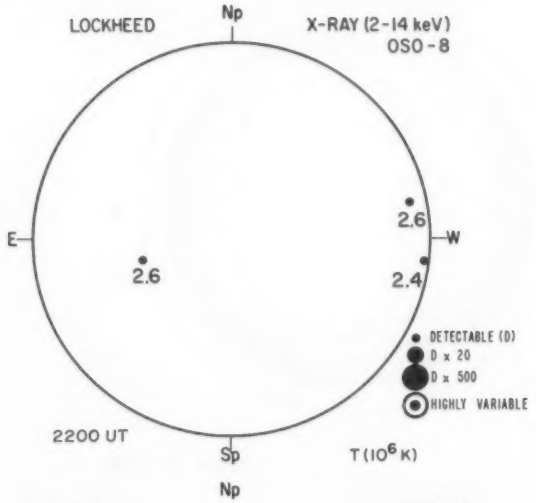
Ant. Temp. Unit 100°K

71
Apr 76

APRIL 24, 1976 (P =-25.23, B_o =-480, L_o =86.24)

LOCKHEED

X-RAY (2-14 keV)
OSO-8



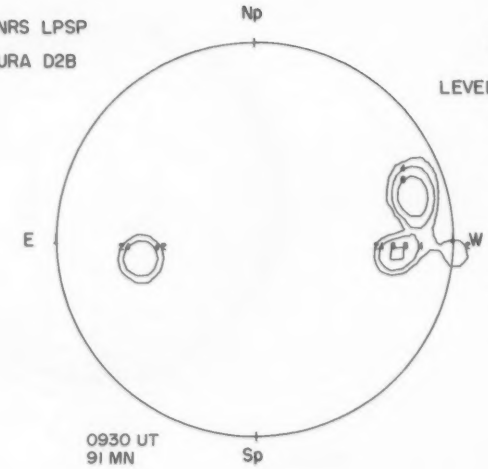
KITT PEAK

MAGNETOGRAM
Bright - Plus
Dark - Minus

CNRS LPSP
AURA D2B

FE XV
284 A

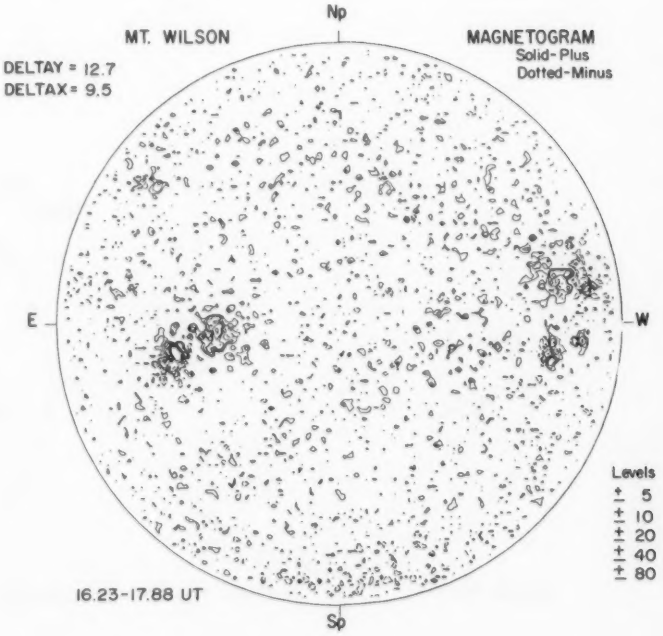
LEVEL 0=20
1=28
2=40
3=56
4=80
5=113
6=160
7=226
8=320
9=452
10=640



MT. WILSON

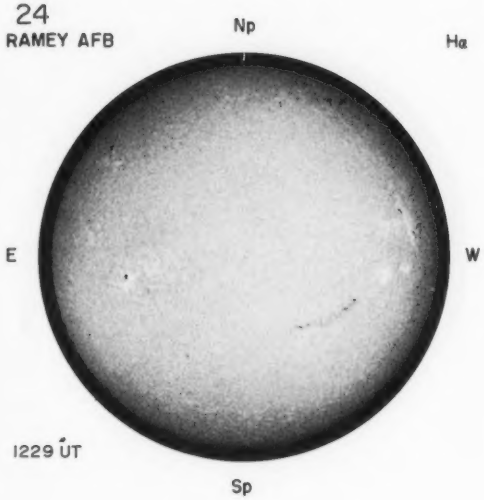
MAGNETOGRAM
Solid-Plus
Dotted-Minus

DELTAY = 12.7
DELTAX = 9.5



24

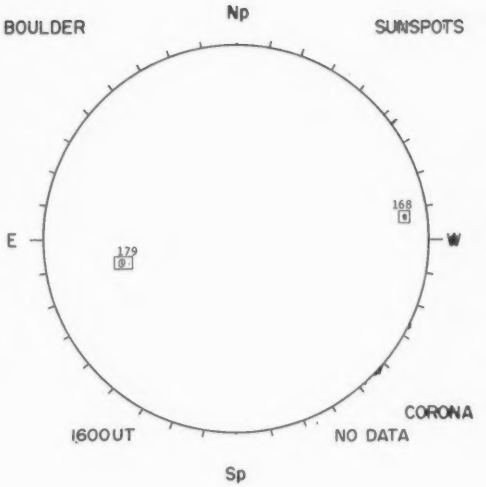
RAMEY AFB



Hα

1229 UT

BOULDER



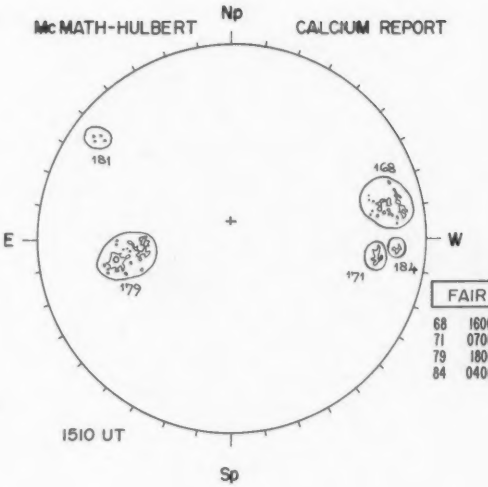
SUNSPOTS

1600 UT

CORONA

NO DATA

Mc MATH-HULBERT



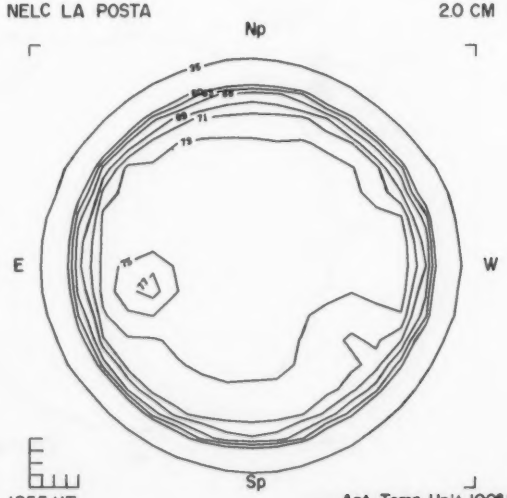
1510 UT

CALCIUM REPORT

FAIR	M
68	1600 3.0
71	0700 3.0
79	1800 3.0
84	0400 2.5

NELC LA POSTA

2.0 CM

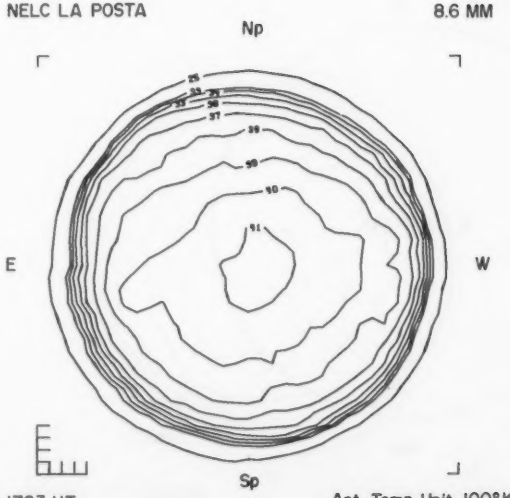


1855 UT

Ant. Temp. Unit 100° K

NELC LA POSTA

8.6 MM



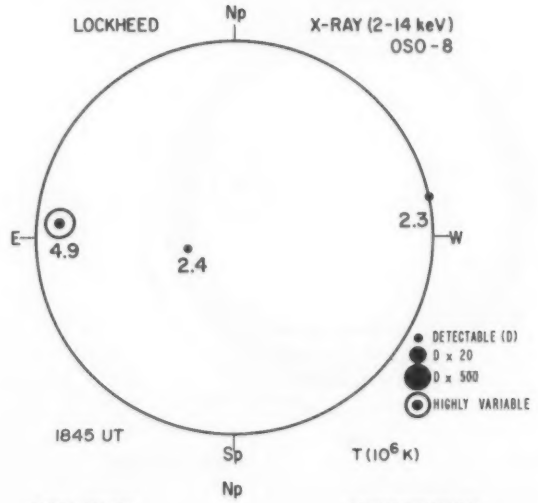
1723 UT

Ant. Temp. Unit 100° K

73
Apr 76

APRIL 25, 1976 (P =-25.10, B_o =-4.70, L_o =73.03)

LOCKHEED



X-RAY (2-14 keV)
OSO-8

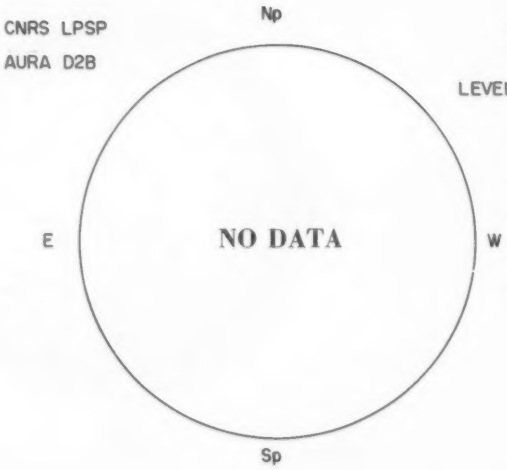
1845 UT

T(10^6 K)

KITT PEAK

MAGNETOGRAM
Bright- Plus
Dark - Minus

CNRS LPSP
AURA D2B

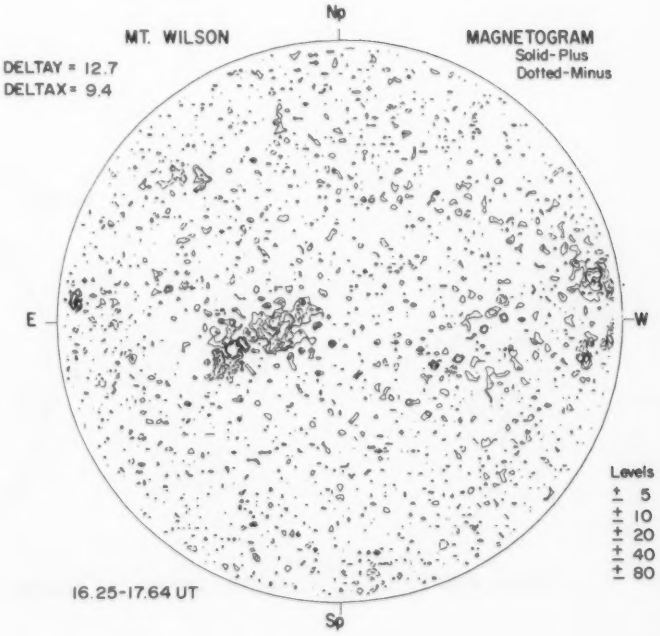


FE XV
284 A

LEVEL 0=20
1=28
2=40
3=56
4=80
5=113
6=160
7=226
8=320
9=452
10=640

MT. WILSON

DELTAY = 12.7
DELTAX = 9.4



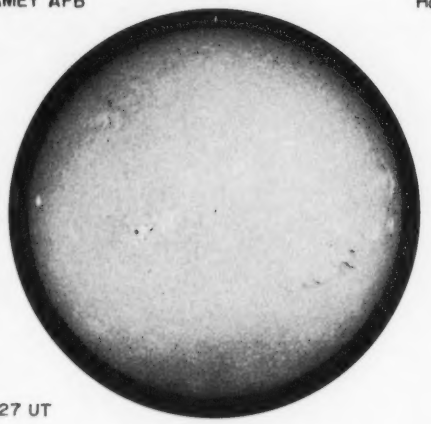
MAGNETOGRAM
Solid- Plus
Dotted-Minus

Levels
± 5
± 10
± 20
± 40
± 80

16.25-17.64 UT

25

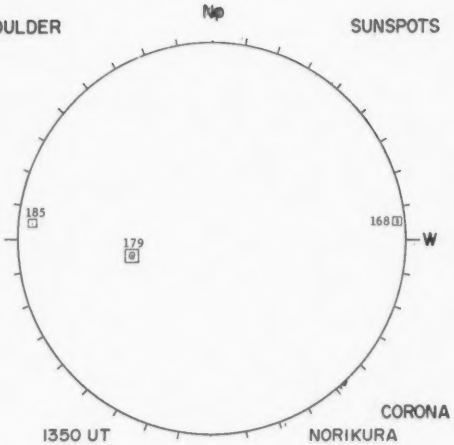
RAMEY AFB



1227 UT

Hα

BOULDER



SUNSPOTS

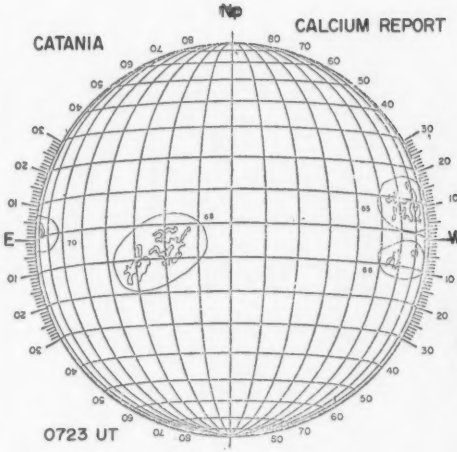
1350 UT

CORONA

NORIKURA

CATANIA

CALCIUM REPORT

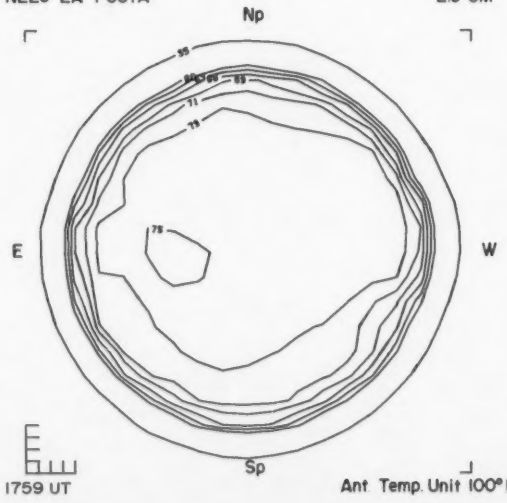


0723 UT

	FAIR	GD
65	4353	--
66	1155	--
68	3696	--
70	0832	--

NELC LA POSTA

2.0 CM

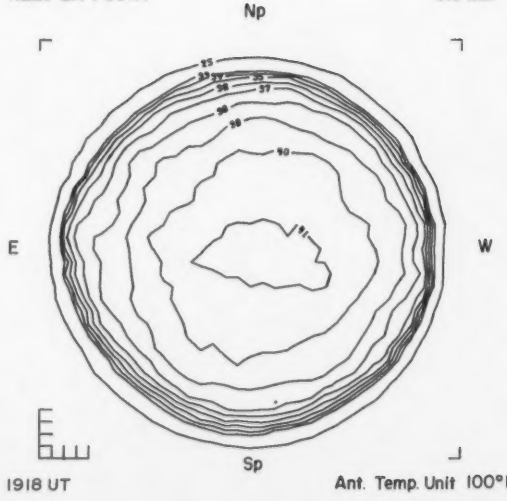


1759 UT

Ant. Temp. Unit 100°K

NELC LA POSTA

8.6 MM



1918 UT

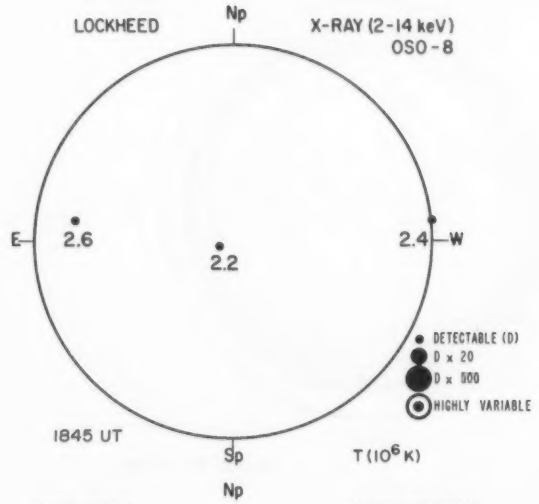
Ant. Temp. Unit 100°K

75
Apr 76

APRIL 26, 1976 (P =-24.96, B_o =-4.61, L_o =59.82)

LOCKHEED

X-RAY (2-14 keV)
OSO-8



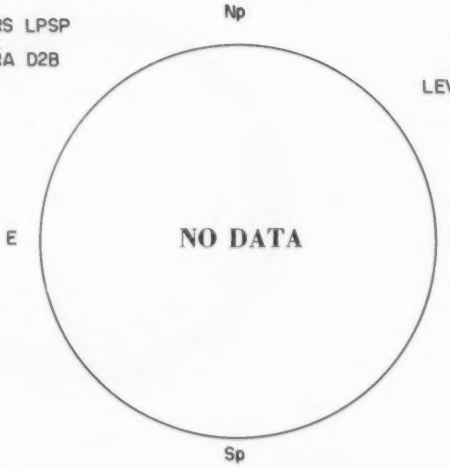
KITT PEAK

MAGNETOGRAM
Bright - Plus
Dark - Minus

CNRS LPSP
AURA D2B

FE XV
284 A

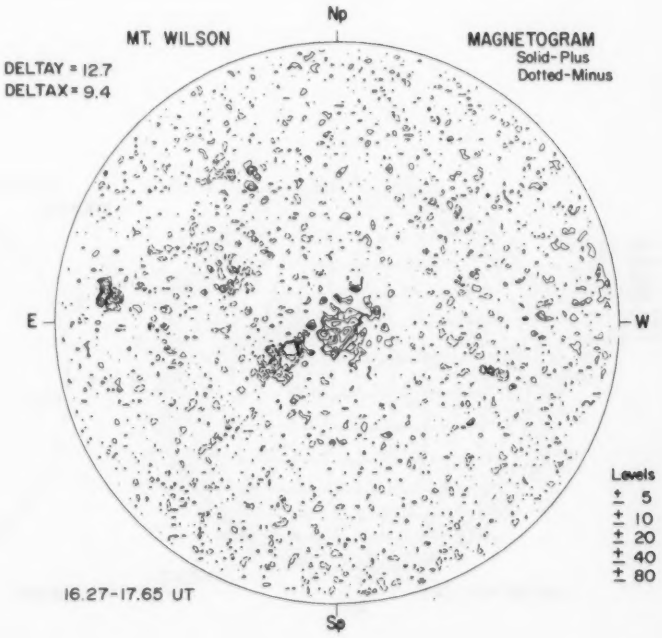
LEVEL 0=20
1=28
2=40
3=56
4=80
5=113
6=160
7=226
8=320
9=452
10=640



MT. WILSON

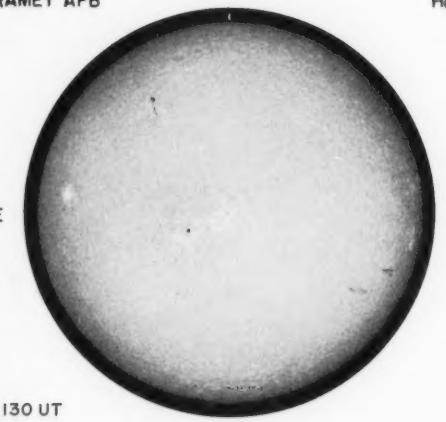
MAGNETOGRAM
Solid-Plus
Dotted-Minus

DELTAY = 12.7
DELTAX = 9.4



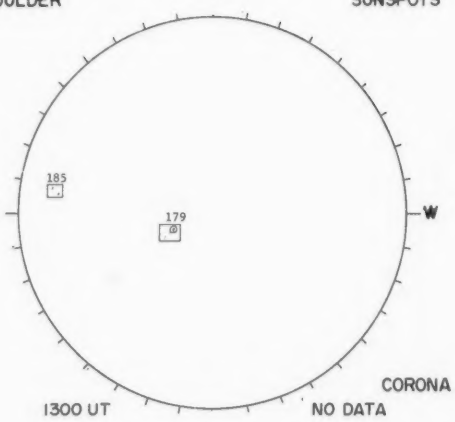
26

RAMEY AFB



1130 UT

Hα BOULDER



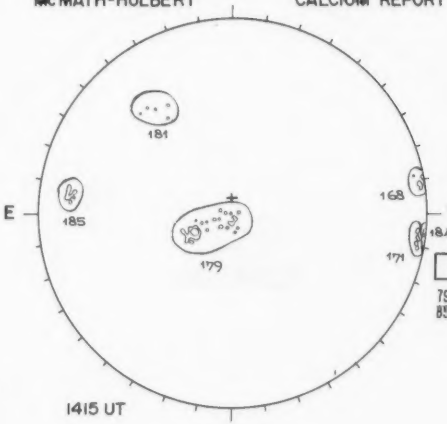
1300 UT

SUNSPOTS

CORONA

NO DATA

McMATH-HULBERT



1415 UT

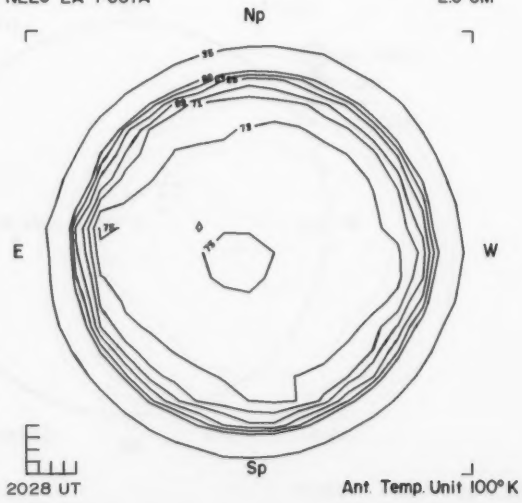
CALCIUM REPORT

FAIR D

79 1600 2.5

85 0900 3.5

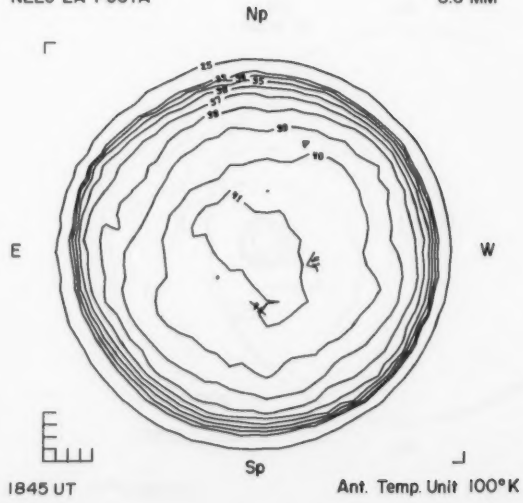
NELC LA POSTA 2.0 CM



2028 UT

Ant. Temp. Unit 100°K

NELC LA POSTA 8.6 MM



1845 UT

Ant. Temp. Unit 100°K

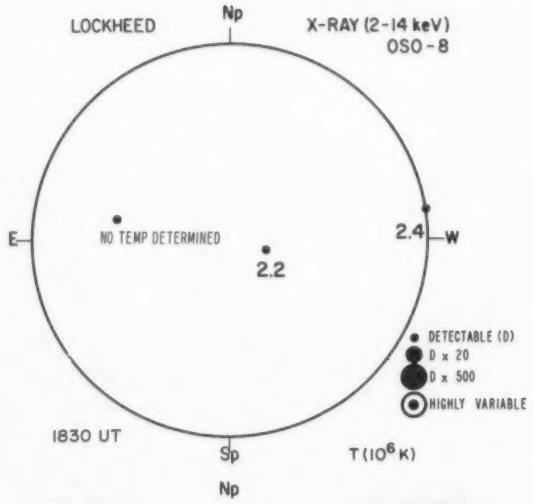
77

Apr 76

APRIL 27, 1976 (P =-24.81, B_0 =-4.51, L_0 =46.61)

LOCKHEED

X-RAY (2-14 keV)
OSO-8

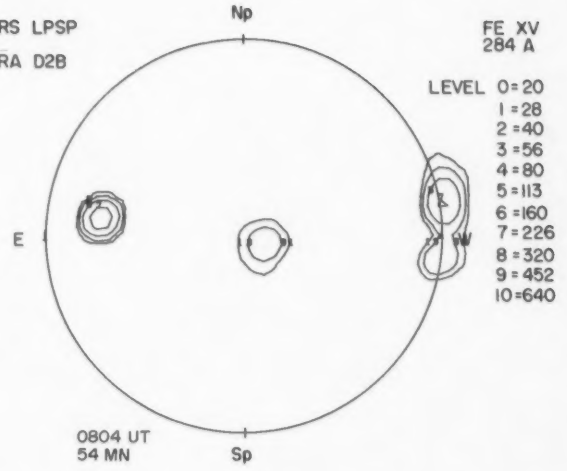


KITT PEAK

MAGNETOGRAM
Bright - Plus
Dark - Minus

CNRS LPSP
AURA D2B

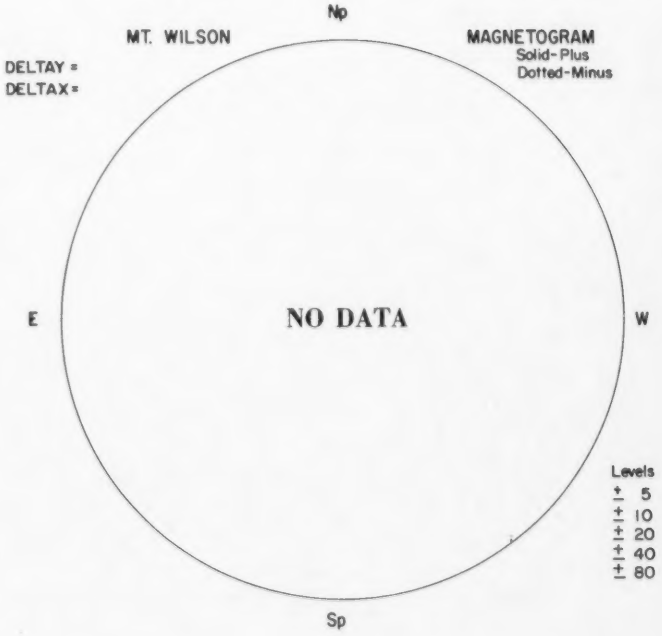
FE XV
284 A



MT. WILSON

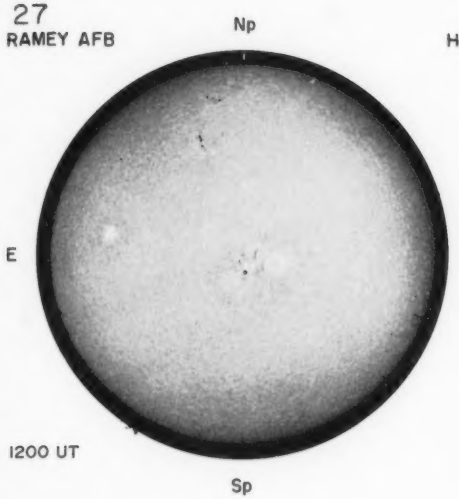
MAGNETOGRAM
Solid - Plus
Dotted - Minus

DELTAY =
DELTAX =

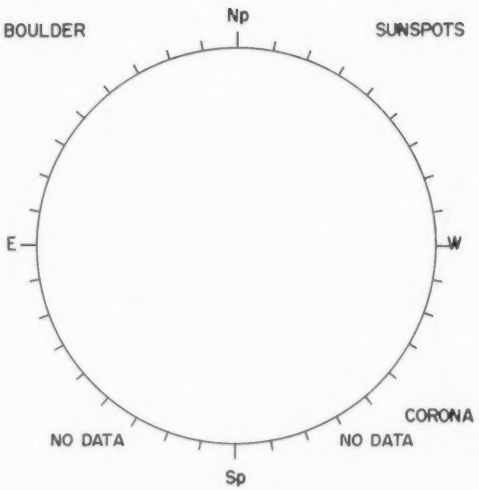


27

RAMEY AFB



Hα BOULDER

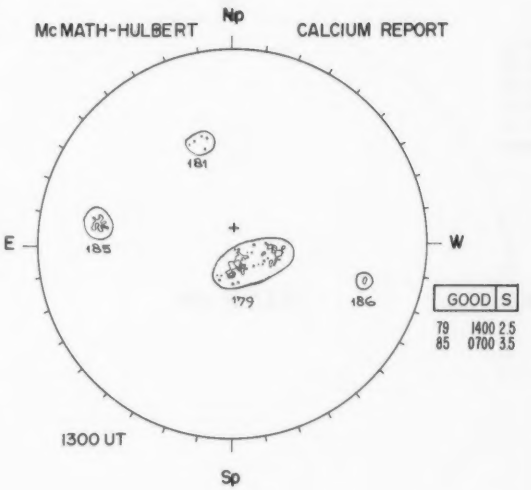


SUNSPOTS

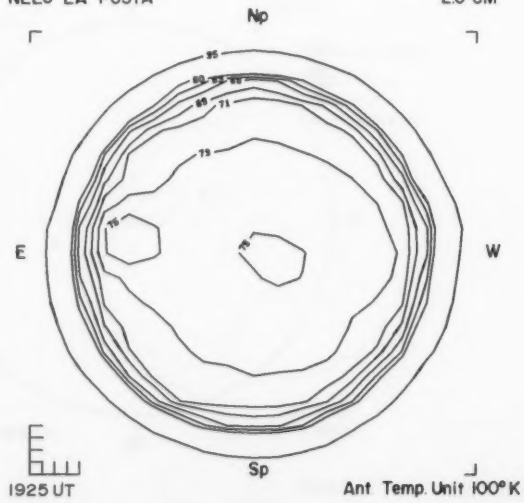
CORONA

McMATH-HULBERT

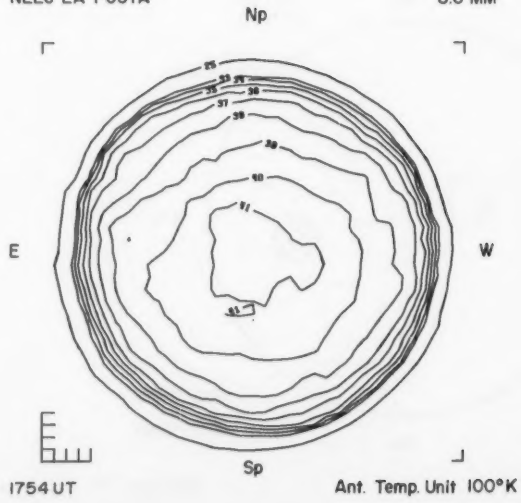
CALCIUM REPORT



NELC LA POSTA 2.0 CM



NELC LA POSTA 8.6 MM

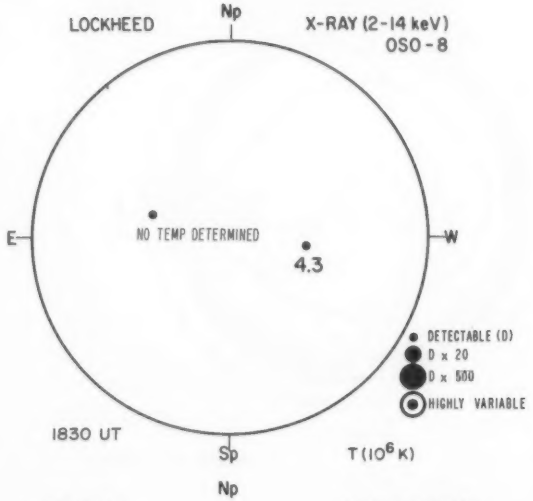


79
Apr 76

APRIL 28, 1976 (P =-24.66, B_o =-4.42, L_o =33.39)

LOCKHEED

X-RAY (2-14 keV)
OSO-8

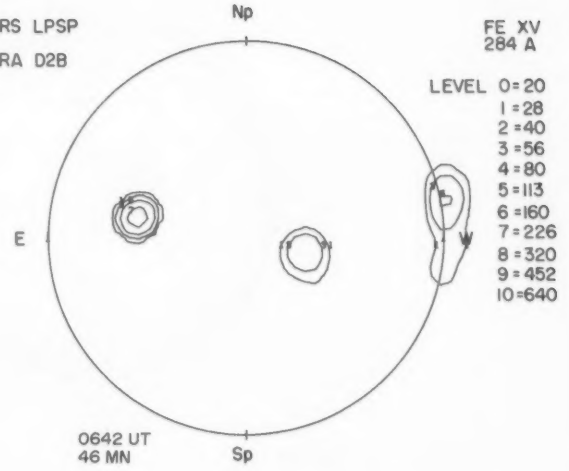


KITT PEAK

MAGNETOGRAM
Bright - Plus
Dark - Minus

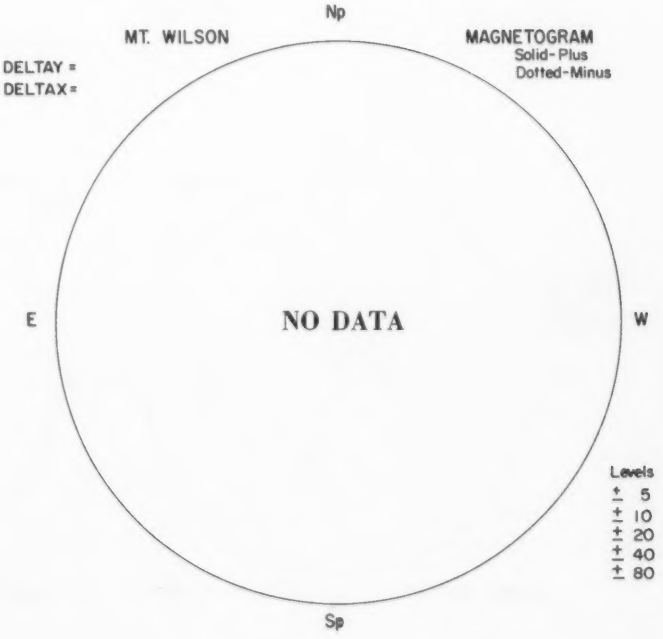
CNRS LPSP
AURA D2B

FE XV
284 A



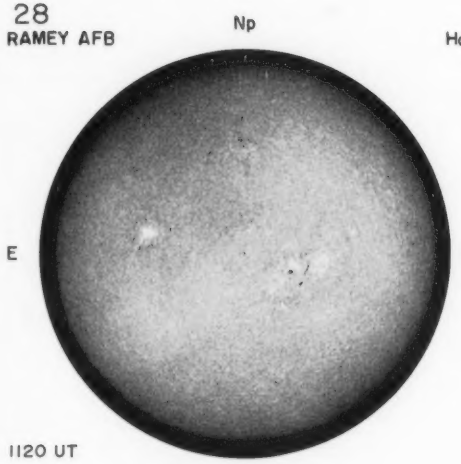
MT. WILSON

MAGNETOGRAM
Solid-Plus
Dotted-Minus



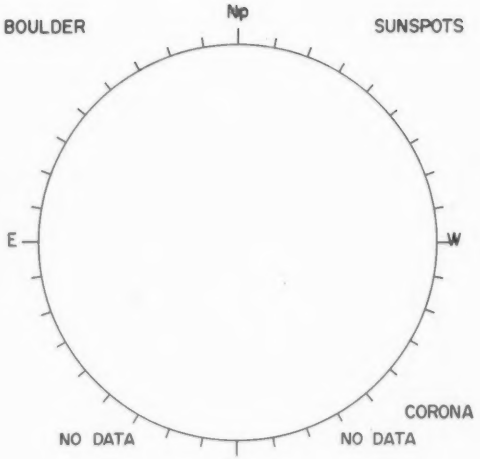
28

RAMEY AFB



1120 UT

Hα BOULDER

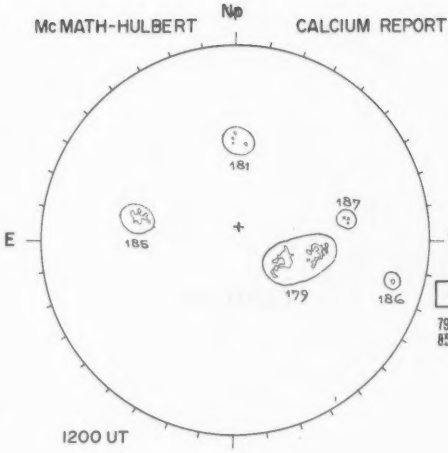


NO DATA NO DATA

SUNSPOTS

CORONA

McMATH-HULBERT



1200 UT

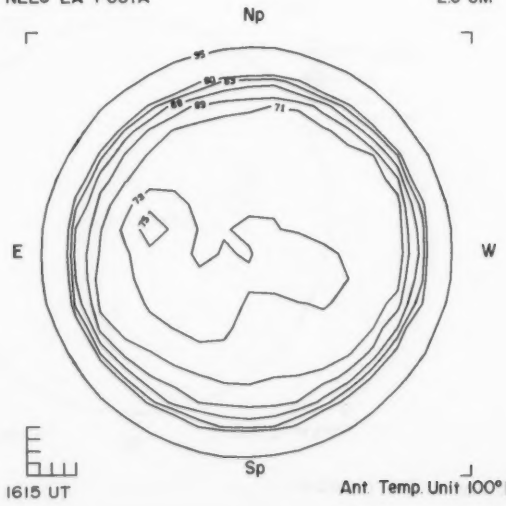
CALCIUM REPORT

GOOD	S

79 1400 2.5
85 0700 3.0

NELC LA POSTA

2.0 CM

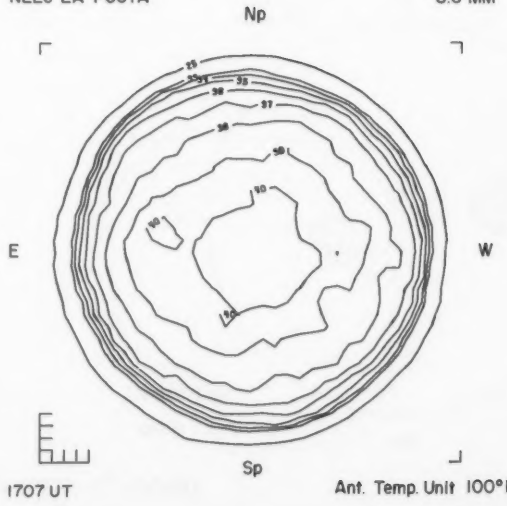


1615 UT

Ant. Temp. Unit 100°K

NELC LA POSTA

8.6 MM



1707 UT

Ant. Temp. Unit 100°K

APRIL 29, 1976 (P=-24.50, B_0=-4.32, L_0=20.18)

LOCKHEED

Np

X-RAY (2-14 keV)
OSO-8

E

NO TEMP DETERMINED

6.9

W

DETECTABLE (D)
D x 20
D x 500
HIGHLY VARIABLE

2030 UT

Sp

T(10^6 K)

Np

KITT PEAK

MAGNETOGRAM
Bright - Plus
Dark - Minus

CNRS LPSP
AURA D2B

Np

FE XV
284 A

LEVEL 0=20
1=28
2=40
3=56
4=80
5=113
6=160
7=226
8=320
9=452
10=640

E

W

0655 UT
45 MN

Sp

Np

MT. WILSON

MAGNETOGRAM
Solid-Plus
Dotted-Minus

DELTAY =
DELTAX =

E

NO DATA

W

Levels
± 5
± ± 10
± ± 20
± ± 40
± ± 80

Sp

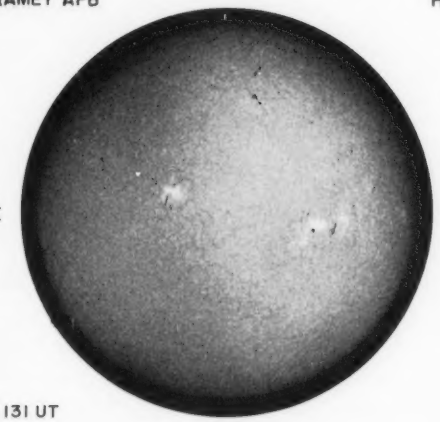
E

W

Sp

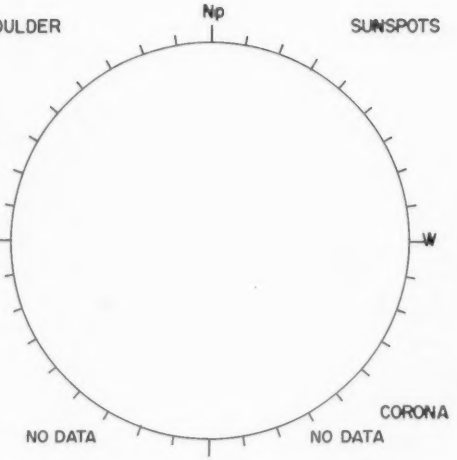
29

RAMEY AFB



1131 UT

Hα BOULDER

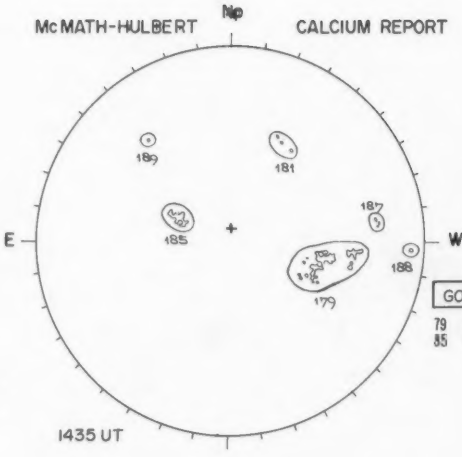


NO DATA

NO DATA

SUNSPOTS

McMATH-HULBERT



1435 UT

CALCIUM REPORT

GOOD	M

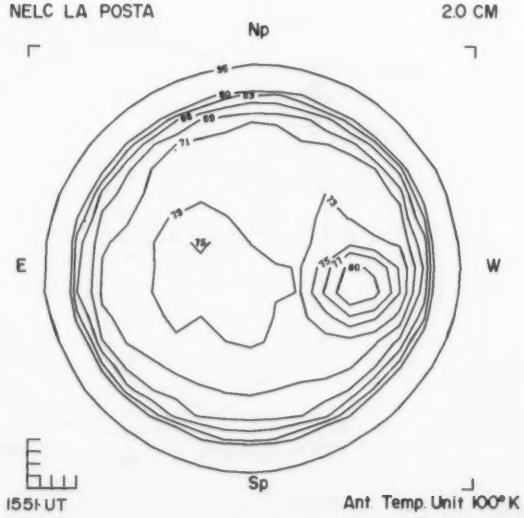
79 1800 3.5

85 0600 4.0

CORONA

NELC LA POSTA

2.0 CM

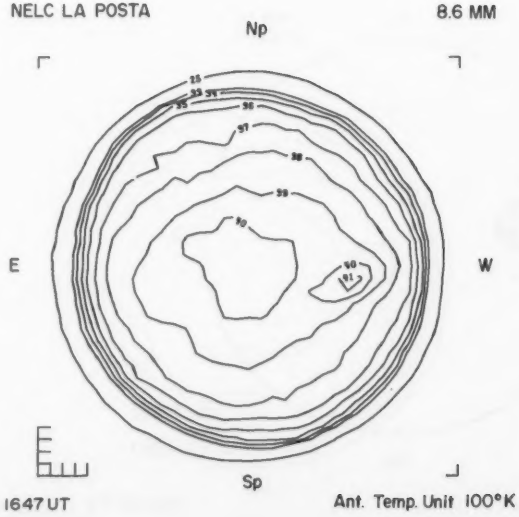


1551 UT

Ant. Temp. Unit 100°K

NELC LA POSTA

8.6 MM



1647 UT

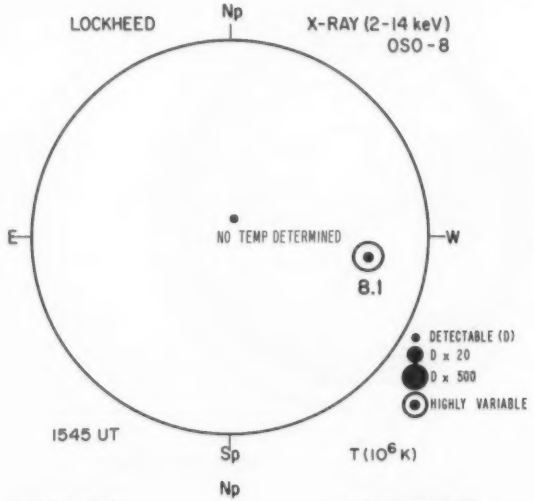
Ant. Temp. Unit 100°K

83

Apr 76

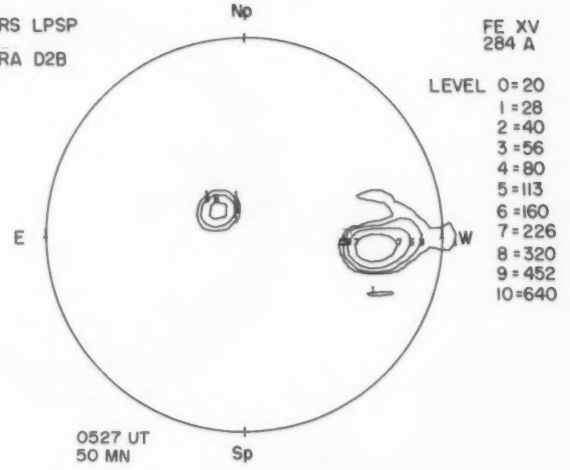
APRIL 30, 1976 (P =-24.33, B_o =-4.22, L_o =6.96)

LOCKHEED X-RAY (2-14 keV)
OSO-8

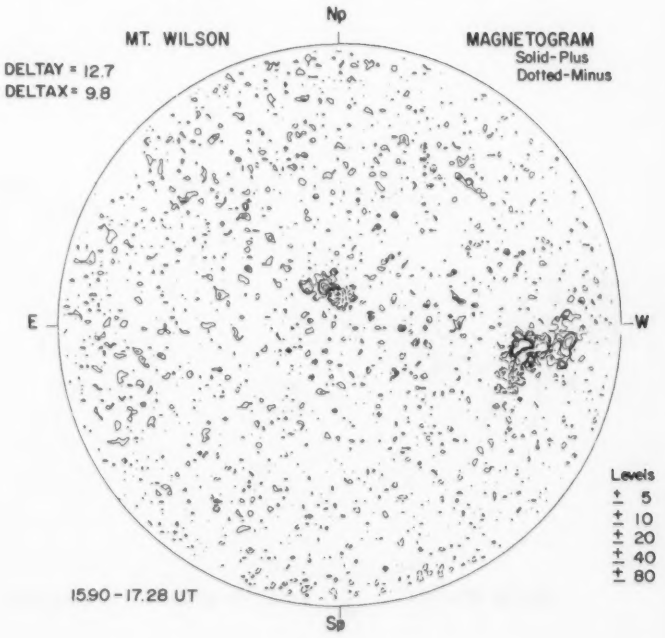


KITT PEAK MAGNETOGRAM
Bright - Plus
Dark - Minus

CNRS LPSP
AURA D2B
FE XV
284 A

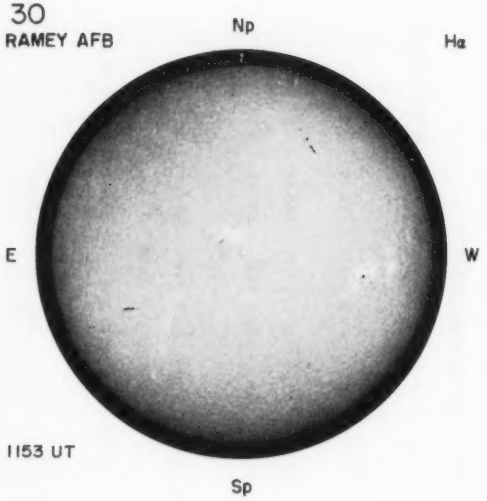


MT. WILSON MAGNETOGRAM
Solid-Plus
Dotted-Minus



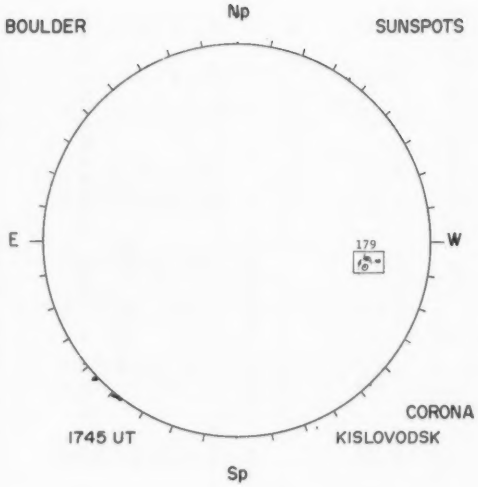
30

RAMEY AFB



1153 UT

BOULDER



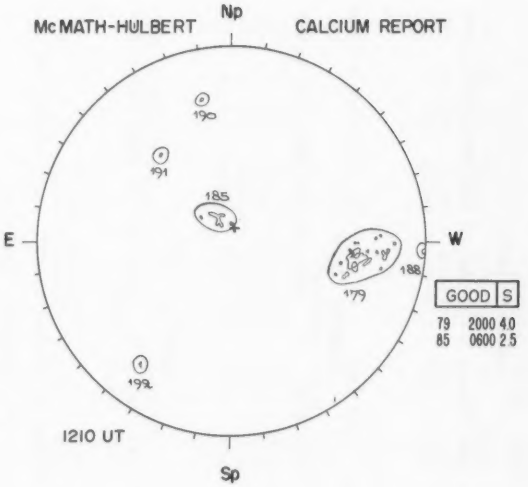
1745 UT

CORONA

KISLOVODSK

McMATH-HULBERT

CALCIUM REPORT



1210 UT

GOOD	S
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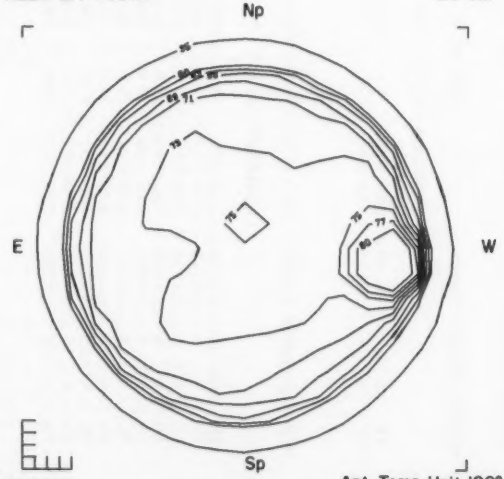
85	0600 2.5

NELC LA POSTA

2.0 CM

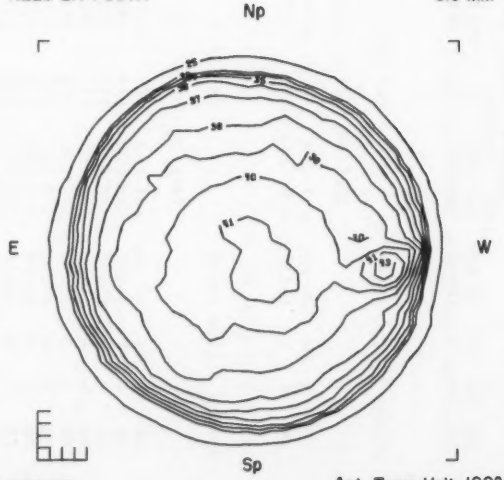


1804 UT

Ant. Temp. Unit 100°K

NELC LA POSTA

8.6 MM



1627 UT

Ant. Temp. Unit 100°K

85
Apr 76

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MCMATH REGION 14154 CMP DATE 4.2

				CALCIUM PLAGE DATA				SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT CLASS
76	4	5	14154	N05 W17	348	100	1.5							

MCMATH REGION 14153 CMP DATE 7.6

				CALCIUM PLAGE DATA				SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT CLASS
76	4	4	14153	N15 E39	303	200	1.5							

MCMATH REGION 14155 CMP DATE 8.6

				CALCIUM PLAGE DATA				SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT CLASS
76	4	5	14155	N32 E41	290	100	1.5							

MCMATH REGION 14152 CMP DATE 9.4 RETURN OF REGION 14123* ROTATION 2

				CALCIUM PLAGE DATA				SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT CLASS
76	4	2	14152	S33 E87	278	400	1.0							
76	4	3	14152	S33 E75	281	300	1.0							
76	4	4	14152	S33 E63	279	300	1.0							
76	4	5	14152	S33 E50	281	300	1.5							
76	4	6	14152	S33 E37	280	300	1.0							
76	4	7	14152	S34 E24	279	200	1.5							
76	4	8	14152	S34 E11	280	400	1.5							
76	4	9	14152	S33 W01	279	300	1.0							
76	4	10	14152	S34 W12	276	100	1.0							
76	4	11	14152	S33 W24	275	200	1.0							
76	4	12	14152	S33 W36	274	200	1.0							
76	4	13	14152	S33 W50	275	200	1.0							

MCMATH REGION 14158 CMP DATE 10.1

				CALCIUM PLAGE DATA				SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT CLASS
76	4	6	14158	N11 E47	270	100	2.0							

MCMATH REGION 14156 CMP DATE 10.3 RETURN OF REGION 14123* ROTATION 2

				CALCIUM PLAGE DATA				SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT CLASS
76	4	4	14156	S39 E76	266	200	1.0							
76	4	5	14156	S39 E60	271	200	1.0							
76	4	6	14156	S39 E49	268	100	1.0							
76	4	7	14156	S39 E36	267	200	1.0							
76	4	8	14156	S39 E24	267	200	1.0							
76	4	9	14156	S39 E11	267	200	1.0							
76	4	10	14156	S39 W02	266	100	1.0							
76	4	11	14156	S39 W17	268	100	1.0							
76	4	12	14156	S38 W28	266	200	1.0							

MCMATH REGION 14159 CMP DATE 12.1

				CALCIUM PLAGE DATA				SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT CLASS
76	4	11	14159	S26 E07	244	100	1.5							

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MCMATH REGION 14164 CMP DATE 12.1

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT CLASS
76	4	11	14164	S37 E07	244	100	1.5								
76	4	12	14164	S38 W06	244	100	1.5								
76	4	13	14164	S38 W19	244	200	1.0								

MCMATH REGION 14166 CMP DATE 12.6

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT CLASS
76	4	12	14166	S07 E31	237	100	1.0								
76	4	13	14166	S07 W14	239	200	1.0								
76	4	14	14166	S07 W29	240	200	1.0								

MCMATH REGION 14160 CMP DATE 12.7

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT CLASS
76	4	7	14160	S04 E68	235	200	1.0								

MCMATH REGION 14162 CMP DATE 13.5

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT CLASS
76	4	9	14162	N34 E50	228	100	2.0								
76	4	10	14162	N34 E38	226	100	1.0								

MCMATH REGION 14163 CMP DATE 14.0

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT CLASS
76	4	10	14163	S12 E47	217	300	2.5								
76	4	11	14163	S12 E35	216	200	2.0								
76	4	12	14163	S13 E21	217	200	1.5								
76	4	13	14163	S13 E07	218	200	1.5								
76	4	14	14163	S13 W06	217	100	1.0								
76	4	15	14163	S13 W19	217	200	1.5								
76	4	16	14163	S13 W32	217	100	2.0								
76	4	17	14163	S13 W44	215	100	1.0								

MCMATH REGION 14161 CMP DATE 14.9 RETURN OF REGION 14127 ROTATION 2

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT CLASS
76	4	8	14161	N06 E85	206	1000	3.0		N05 E85				B	150	1 HSX
76	4	9	14161	N06 E72	206	2000	3.5	19672	N03 E66	208	(AP)	4	B	190	1 HSX
76	4	10	14161	N07 E60	204	2700	3.0	19672	N03 E55	207	(AP)	4	B	200	1 HSX
76	4	11	14161	N06 E46	205	2500	3.5		N02 E38				B	10	2 BXO
76	4								N07 E39				B	10	4 BXO
76	4								N04 E41				B	190	1 HSX
76	4	12	14161	N06 E32	206	3000	3.5	19673	N02 E24	212	(A)	1	B	10	7 AXX
76	4							19672	N03 E28	208	(AP)	5	B	200	6 HSX
76	4	13	14161	N06 E19	206	3200	3.0		N07 E14				B	0	4 AXX
76	4								N06 E22				B	0	5 AXX
76	4								N02 E11				B	0	6 BXO
76	4								N03 E16				B	220	7 HSX
76	4	14	14161	N06 E04	207	3300	3.0	19673	N01 W04	213	(A)	2	B	0	5 BXO
76	4							19672	N02 E01	208	(AP)	5	B	180	1 HSX
76	4								N08 E06				B	0	1 AXX
76	4								N06 E08				B	10	1 AXX
76	4	15	14161	N05 W10	208	3000	2.5		N02 W10				B	180	7 CSO
76	4	16	14161	N04 W23	208	2900	2.5	19672	N03 W30	210	(AP)	5	B	190	1 HSX
76	4	17	14161	N04 W35	206	2600	2.5	19672	N03 W39	208	(AP)	5	R	200	1 HSX
76	4	18	14161	N04 W48	206	2400	2.5	19672	N02 W53	210	(AP)	5	B	210	1 HSX
76	4	19	14161	N05 W62	207	2400	3.5	19672	N02 W67	211	(AP)	5	B	210	1 HSX
76	4	20	14161	N06 W79	208	2800	3.5	19672	N02 W80	210	(AP)	4	B	170	1 HSX

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MCMATH REGION 14173 CMP DATE 15.4

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	4	13	14173	N32 W42	200	100	1.5									
76	4	13	14173	N32 W54	199	100	1.0									

MCMATH REGION 14176 CMP DATE 16.0

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	4	19	14176	S07 W47	192	300	2.0									
76	4	20	14176	S07 W64	193	200	1.5									
76	4	21	14176	S07 W77	194	100	1.0									

MCMATH REGION 14174 CMP DATE 16.2

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	4	18	14174	N38 W31	189	100	1.5									
76	4	19	14174	N38 W44	189	200	1.0									

MCMATH REGION 14165 CMP DATE 17.4

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	4	12	14165	S18 E65	173	100	1.0									
76	4	13	14165	S18 E51	174	100	1.0									

MCMATH REGION 14178 CMP DATE 17.5

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	4	20	14178	S05 W44	173	200	2.0	19676	S07 W43	173	(BP)	2	B	10	3	BXO
76	4	21	14178	S05 W56	173	300	1.5									
76	4	22	14178	S05 W69	173	300	1.5									
76	4	23	14178	S05 W81	174	100	1.0									

MCMATH REGION 14170 CMP DATE 18.5

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	4	16	14170	S08 E28	157	100	2.0									
76	4	17	14170	S08 E14	157	100	1.5									
76	4	18	14170	S08 W01	159	100	1.5									

MCMATH REGION 14184 CMP DATE 20.2

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	4	24	14184	S05 W58	136	400	2.5	19678	S07 W58	136	(AF)	2				
76	4	26	14184	S05 W85	138	200	2.0									

MCMATH REGION 14175 CMP DATE 20.4

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	4	18	14175	S05 E24	134	100	1.5									

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MCMATH REGION 14168 CMP DATE 20.5 RETURN OF REGION 14146 ROTATION 2

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
76	4	14	14168	N09 E84	127	1400	2.0
76	4	15	14168	N06 E67	131	1800	2.5
76	4	16	14168	N06 E55	130	1500	2.0
76	4	17	14168	N06 E42	129	1600	2.5
76	4	18	14168	N06 E27	131	1700	2.5
76	4	19	14168	N06 E12	133	2000	2.5
76	4	20	14168	N06 W06	135	1800	2.5
76	4	21	14168	N06 W18	135	1700	2.5
76	4	22	14168	N06 W30	134	1500	2.5
76	4	23	14168	N06 W42	135	1600	3.0
76	4	24	14168	N06 W56	134	1600	3.0
76	4	25					
76	4	26	14168	N08 W82	135	800	2.0

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
19674	N04 E70	139	(AP)	4	B	120	1	HSX
	N04 E58				B	100	1	HSX
19674	N05 E41	139	(AP)	5	B	90	1	HSX
19674	N05 E31	138	(AP)	4	R	90	1	HSX
19674	N05 E17	140	(AP)	4	B	110	2	HSX
19674	N05 E04	140	(AP)	5	B	120	2	CSO
19674	N05 W10	140	(AP)	5	B	130	3	HSX
19674	N05 W23	140	(AP)	5	B	80	1	HSX
19674	N05 W35	139	(AP)	3	B	80	2	HSX
19674	N05 W50	141	(AP)	3	B	80	2	HSX
19674	N05 W63	141	(AP)	2	B	70	1	HSX
19674	N05 W78	144	(AP)	2	B	60	1	HSX

MCMATH REGION 14169 CMP DATE 20.9

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
76	4	15	14169	S18 E72	126	100	1.0
76	4	16	14169	S18 E60	125	100	1.5
76	4	17	14169	S18 E46	125	100	1.0
76	4	18	14169	S18 E31	127	100	1.0

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS

MCMATH REGION 14171 CMP DATE 21.1

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
76	4	15	14171	S10 E65	120	100	1.0
76	4	17	14171	S10 E49	122	300	3.0
76	4	18	14171	S09 E35	123	600	2.5
76	4	19	14171	S10 E20	125	700	2.5
76	4	20	14171	S10 E04	125	500	2.5
76	4	21	14171	S10 W08	125	500	3.0
76	4	22	14171	S10 W21	125	400	3.0
76	4	23	14171	S09 W33	126	500	3.0
76	4	24	14171	S09 W47	125	700	3.0
76	4	26	14171	S08 W76	129	500	2.0

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
19675	S09 E47	122	(BP)	2	R	10	3	BXO
19675	S10 E32	125	(BP)	3	B	20	5	CRO
19675	S10 E19	125	(BP)	3	B	10	14	BXO
19675	S10 E04	126	(BP)	2	B	10	8	BXO
19675	S10 W07	124	(AF)	1	B	0	2	AXX
19675	S10 W21	125	BF					
19675	S10 W32	123	AF					

MCMATH REGION 14177 CMP DATE 22.0

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
76	4	19	14177	N27 E32	113	100	1.0

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS

MCMATH REGION 14182 CMP DATE 23.1

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
76	4	23	14182	S01 W06	99	200	1.5

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS

MCMATH REGION 14180 CMP DATE 23.8

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
76	4	22	14180	S45 E15	89	100	2.0

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS

MCMATH REGION 14186 CMP DATE 24.1

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
76	4	27	14186	S14 W45	84	100	2.0
76	4	28	14186	S14 W57	84	100	1.0

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS

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MCMATH REGION 14183 CMP DATE 24.4

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	4	29	14183	S03 W69	82	100	1.0									
76	4	30	14188	S03 W83	84	100	1.0									

MCMATH REGION 14187 CMP DATE 25.9

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	4	28	14187	N03 W34	61	200	1.5									
76	4	29	14187	N03 W48	61	100	1.0									

MCMATH REGION 14179 CMP DATE 27.2 RETURN OF REGION 14143 ROTATION 3

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	4	20	14179	S07 E80	49	1800	2.0	19677	S10 E89	41	AF					
76	4	21	14179	S07 E72	45	1900	2.5	19677	S10 E78	39	(AF)	4	B	150	1	HSX
76	4	22	14179	S07 E58	46	1800	2.5	19677	S10 E64	40	(AF)	4	B	130	2	HSX
76	4	23	14179	S07 E47	46	1800	3.0	19677	S10 E50	41	(AF)	5	B	160	3	CSO
76	4	24	14179	S07 E34	44	1800	3.0	19677	S10 E38	40	(BF)	4	B	170	3	HSX
76	4	25						19677	S10 E24	42	(AF)	5	B	160	1	HSX
76	4	26	14179	S08 E08	45	1600	2.5	19677	S10 E11	42	(AF)	5	B	180	4	CSO
76	4	27	14179	S08 W06	45	1400	2.5	19680	S08 W04	42	B					
76	4							19677	S10 W03	41	AF		R	160	7	CSO
76	4	28	14179	S08 W19	46	1400	2.5	19680	S08 W17	42	(BF)	3				
76	4							19677	S10 W16	41	(AF)	4				
76	4	29	14179	S08 W30	43	1800	3.5	19680	S08 W31	44	(BF)	4				
76	4							19677	S10 W29	42	(AF)	5	R	170	8	DSI
76	4	30	14179	S08 W41	42	2000	4.0	19680	S08 W42	42	D	4				
76	4							19677	S10 W40	40	(AF)	5	B	250	49	DSC
76	5	1	14179	S08 W56		2300	3.5	19677	S10 W56		(AF)	4	B	250	38	DSC
76	5	1						19680	S08 W58		(D)	4				
76	5	2	14179	S08 W67		2000	3.5	19677	S10 W70		(AF)	4	B	180	22	CSO
76	5	2						19680	S08 W72		(BY)	2				
76	5	3	14179	S09 W80		1500	3.0	19677	S10 W82		AF		B	100	1	HSX
76	5	3						19680	S07 W82							

MCMATH REGION 14181 CMP DATE 28.5

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	4	22	14181	N28 E80	24	400	1.5									
76	4	23	14181	N28 E69	24	300	1.0									
76	4	24	14181	N28 E55	23	200	1.0									
76	4	26	14181	N28 E28	25	200	1.0									
76	4	27	14181	N28 E13	26	100	1.0									
76	4	28	14181	N28 E00	27	100	1.0									
76	4	29	14181	N28 W15	28	100	1.0									

MCMATH REGION 14197 CMP DATE 29.1

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	5	4	14197	S37 W70		100	1.5									

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MCMATH REGION 14185 CMP DATE 30.8

				CALCIUM PLAGE DATA					SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT	CMD	L	AREA	INT	MW NO.	LAT	CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	4	25							19679	N03	E69	358	(BP	2	B	10	1	AXX
76	4	26	14185	N04	E56	358	900	3.5	19679	N03	E57	357	(BP)	3	B	20	4	BXO
76	4	27	14185	N04	E43	357	700	3.5	19679	N03	E40	359	BP		R	50	6	CSO
76	4	28	14185	N04	E30	358	700	3.0	19679	N03	E27	359	(3P	2				
76	4	29	14185	N04	E16	358	600	4.0										
76	4	30	14185	N04	E04	358	600	2.5	19679	N05	E04	357	(AF)	3				
76	5	1	14185	N04	W12		600	3.0										
76	5	2	14185	N04	W24		600	3.0										
76	5	3	14185	N04	W36		600	3.0										
76	5	4	14185	N03	W50		500	2.0										
76	5	5	14185	N03	W64		400	2.5										

Note: Region 14171 forms on the disk near the east limb, in the location of plage 14147 of the previous rotation.
No calcium spectroheliogram was obtained at the McMath-Hulbert Observatory on April 25, 1976.
No sunspot observations were made at Mt. Wilson Observatory on April 4, 5, 8, 11, 13 and 15, 1976.

DAILY CALCIUM PLAGE INDEX

APRIL 1976

YR	MO	DAY	INDEX	YR	MO	DAY	INDEX	YR	MO	DAY	INDEX
76	4	1	6.7	76	4	11	6.7	76	4	21	7.0
76	4	2	5.9	76	4	12	9.6	76	4	22	6.9
76	4	3	4.7	76	4	13	9.8	76	4	23	8.7
76	4	4	4.3	76	4	14	10.3	76	4	24	9.0
76	4	5	2.3	76	4	15	9.3	76	4	25	*
76	4	6	0.4	76	4	16	8.7	76	4	26	6.2
76	4	7	0.4	76	4	17	9.0	76	4	27	5.4
76	4	8	0.8	76	4	18	9.4	76	4	28	5.5
76	4	9	2.4	76	4	19	10.8	76	4	29	8.0
76	4	10	4.5	76	4	20	7.9	76	4	30	7.7

* NO OBSERVATIONS

SUDDEN IONOSPHERIC DISTURBANCES

APRIL 1976

DAY	UNIVERSAL TIME START	END	MAX	IMP	WIDE SPREAD INDEX	NUMBER OF STATION REPORTS BY TYPE SWF	SCNA	SEA	SPA	LF-SPA	SES	SFD	KNOWN FLARE	McMATH REGION
11	2225	2245	2230	1-	3	1					2		*	
14	1431	1445	1435	1-	1			1					1430E	14161
20	0219	0321	0224	1-	1				1				0214	14161
24	1359	1455	1406	1-	1			1					*	
28	2013	2105	2018	1-	1	1							2014E	14179
29	1853	2000		1-	1						1		X-RAY	
29	1909	2034	1918	1-	5	2	1	2	1	1	11		1904	14179
30	0553	0745	0608	1	5			1	3				0557	14179
30	1243	1330	1249	1-	3			1	1		1		1243	14179
30	1447	1536	1506	1-	1			1					1451	14179
30	2047	0153	2115	2+	5	4	1	1	1	1	12		2047	14179

PERIODS OF NO OBSERVATIONS:

DATE	TIME (UT) and STATION
04	0000-2400 A41, 1937-2140 UM (10 kHz)
	2035-2111 UM (13 kHz)
05	1820-2140 UM (10 kHz)
06	0317-0453 UM (10 kHz)
07	1957-2125 UM (10 kHz)
08	0340-0455 UM (10 kHz), 0920-1132 TM,
	2005-2115 UM (10 kHz), 2252-2400 UM (10 kHz)
09-18	0000-2400 A41
09	1945-2121 UM (10 kHz)
10	2005-2123 UM (10 kHz)
11	0636-0707 TM
13	1256-1553 UM (10 kHz), 2030-2050 TM
14-19	0000-2400 A28
14	0308-0443 UM (10 kHz), 1155-1623 UM (10 kHz)
15	1702-2118 UM (10 kHz), 1802-1900 TM,
	1955-2130 UM (10 kHz)
16	1856-2129 UM (10 kHz), 1918-1924 TM
17	0000-0100 UM (10 kHz), 1951-2113 UM (10 kHz)
18	2000-2103 UM (10 kHz)
19	0428-0538 UM (10 kHz), 2000-2104 UM (10 kHz)
20	0416-0525 UM (10 kHz)
21-24	0000-1945 UM (10 kHz)
22	0145-0313 UM (10 kHz), 2002-2105 Um (10 kHz)
23	0013-0144 UM (10 kHz)
24-26	1948-1145 UM (10 kHz)
24	0015-0105 UM (10 kHz), 0326-0430 UM (10 kHz)
25	0428-0534 UM (10 kHz)
27	0519-0621 UM (10 kHz), 2000-2105 UM (10 kHz)
28	2000-2052 UM (10 kHz)
29-30	0000-2400 A36
30	2002-2110 UM (10 kHz)

STATIONS REPORTING FOR APRIL 1976

AAVSO (A1, A4, A19, A21, A28, A29, A30, A31, A34, A35, A37, A40, A41) (SES (A1, A26, A31, A36) (SEA) (A1) (SWF)
DARMSTADT (DA) (SWF)
DEBRE ZEIT (DE) (SPA)
HERSTMONCEUX (HC) (SEA)
HIRAISO (HI) (SWF)
HOBART (TA) (SEA)
HUANCAYO (HU) (SWF)
INUBO (IN) (SPA)
KASUAGE (KA) (SPA)
MCMATH (MC) (SWF, SCNA)
PANSKA VES (PU) (SWF, SEA, SES)
PRESTON (LO) (SEA)
SAO PAULO (UM) (SES, SPA)
SOFIA (SF) (SES)
ST CLOUD (SC) (SES)
TABLE MOUNTAIN (TM) (SPA, LF-SPA)
TORINO (TN) (SPA)
UPICE (UI) (SEA)

SID's BY McMATH REGION

APRIL 1976

DAY	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
REGION																														
61														1						1										
79																												1	1	4
X-RAY																													1	
UNKNOWN																														
NO FP											1													1						

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

APRIL 1976

APR 1976	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT	
01	0000	0130	BOUL				0000	0134	1	0000	0104	1	CONT
	0530	1741	DURN	0530 D	1741 E	3	0530 D	1741 E	3				IC,N,DC
			DURN	0536.0	0536.1	1	0536.0	0536.1	1				III
	0000	1009	MANI							0609.1	0612.0	1	IIIG
			DURN	0623.5	0623.5	1	0623.5	0623.5	2				IIIG
			DURN	0742.5	0742.5	1							III,RS
	0745	1146	WEIS				0936.0	0941.0	1				IDC
	0954	1459	DWIN				0954	1459	1				IS
			DWIN				1041.3	1046.0	3				IIIGG
			WEIS				1041.4	1041.7	3				IIIGG
	1029	2305	SGMR							1041.8	1043.5	2	III
			DWIN				1055.4	1102.0	1				IIIGG
			DWIN				1115.6	1115.9	2				IIIG
			DWIN				1118.6	1121.0	3				IIIG
			WEIS				1118.7	1121	3				IIIGG
			SGMR							1118.8	1121.1	2	IIIG
			DURN	1119.0	1120.0	3	1119.0	1120.0	3				IIIG
			WEIS				1122.4	1122.5	2				IIIB
			DWIN				1211.2	1211.4	2				IIIG
			SGMR							1225.8	1234.1	1	IIIG
			SGMR							1244.6	1249.2	1	IIIG
	1319	1421	WEIS										
			DWIN				1322.2	1322.3	2				IIIG
			DURN	1322.2	1322.3	1	1322.2	1322.3	2				IIIG
			SGMR							1322.3	1322.6	2	III
			DWIN				1436.0	1437.1	2				IIIG
			SGMR							1436.3	1437.0	2	III
	1315	2345	HARV				1436	1437	1	1436	1437	1	IIIG
			DURN	1520.8	1521.3	3	1520.9	1521.3	3				IIIG
			DURN	1536.7	1536.9	3	1536.7	1536.9	3				IIIG
			SGMR							1537.0	1537.3	2	III
			HARV				1537		2	1537		1	IIIG
			DURN	1539.1	1539.1	1	1539.0	1539.1	1				IIIG
			HARV				1539		2	1539		1	IIIB
	1601	2400	BOUL							1601	1755	2	CONT
			BOUL				1616.1	1617.0	2	1616.1	1617.0	2	IIIG
			SGMR							1616.3	1617.2	1	III
			HARV				1616	1617	2	1616	1617	2	IIIG
			DURN	1644.3	1644.4	1	1644.3	1644.4	1				III
			BOUL							1650	1700	1	CONT
			HARV				1655	1659	2	1655	1659	2	IIIG
			HARV				1704	1709	2	1704	1709	2	IIIGG
			SGMR							1705.2	1705.4	1	III
			DURN	1705.6	1705.6	2	1705.6	1705.6	1				III
			HARV				1721	2038	1	1721	2038	1	IIIN
			BOUL				1755	1900	1	1755	1900	1	CONT
			SGMR							1756.5	2305.0	1	I
			HARV				1756	1757	3	1756	1757	3	IIIB
			HARV				1810	1814	2				IIIG
			HARV				1816	1821	2	1816	1821	1	IIIG
			HARV				1837	1839	3	1837	1839	3	IIIG
			BOUL							1900	2400	1	CONT
			HARV				1925	1926	3	1925	1926	3	IIIB
	2153	2400	MANI										
			BOUL				2157.1	2159.5	2	2157.1	2159.5	2	IIIG
			HARV				2157	2159	2	2157	2159	2	IIIG
			HARV				2255	2345	1				IN
02	0000	1009	MANI										
	0000	0130	BOUL							0000	0130	1	CONT
	0529	0612	DURN				0529 D	0612 E	1				IC,N
	0621	1743	DURN	0621 D	1743 E	2	0621 D	1743 E	2				IC,DC,N
	0948	1715	WEIS										
	1249	1734	DWIN				1249	1734	1				IS
			DWIN				1328.6	1329.0	2				IIIG
			DWIN				1558.8	1610.0	1				IIIGG
	1530	2400	BOUL				1637.5	1639.2	2	1637.5	1639.2	2	IIIG
			DWIN				1637.9	1638.3	1				IIIG
	1316	2345	HARV				1637	1638	2	1637	1638	2	IIIG
	1028	2307	SGMR							1638.1	1639.2	1	III

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

APRIL 1976

APR 1976	TIMES OF OBSERVATION START UT	TIMES OF OBSERVATION END UT	STATION	EVENTS DECIMETRIC BAND START UT	DECIMETRIC BAND END UT	DECIMETRIC BAND INT	METRIC BAND START UT	METRIC BAND END UT	METRIC BAND INT	DEKAMETRIC BAND START UT	DEKAMETRIC BAND END UT	DEKAMETRIC BAND INT	SPECTRAL TYPE
02			BOUL				1639	2334	1	1639	2334	1	CONT
			HARV				1645	1646	2	1645	1646	2	IIIG
			BOUL				1827.1	1832.5	2	1827.1	1832.5	2	IIIG
			SGMR							1827.2	1832.3	1	CONT
			HARV				1827	1829	3	1827	1829	3	IIIG,V
			HARV				1832	1833	3	1832	1833	3	IIIG
			HARV				1849		2	1849		2	IIIB
			HARV				1856		2	1856		2	IIIB
			HARV				2102	2103	2				IIIB
	2152	2400	MANI										
			BOUL				2306.7	2307.2	2	2306.7	2307.2	2	III
			HARV				2307		3				U
03	0000	1009	MANI										
	0000	0130	BOUL										
	0602	1747	DWIN				0602	1747	1				IS
	0720	1815	WEIS										
	0528	1744	DURN	1030	1744 E		1030	1744 E					IW,N
			DWIN				1041.8	1044.7	2				IIIGG
			DWIN				1243.9	1246.6	2				IIIG
	1026	2309	SGMR							1245.6	1246.2	1	V
			DWIN				1430.5	1430.6	2				IIIG
			DWIN				1450.4	1457.2	2				IIIG
			DWIN				1458.6	1502.2	2				IIIG
	1230	2400	BOUL							1526.9	1527.6	1	III
			SGMR							1527.3	1527.5	1	III
	1316	2345	HARV				1527		2				IIIB
			DWIN				1703.3	1705.3	2				IIIG
			DWIN				1727.0	1728.0	2				IIIG
	2152	2400	MANI										
			BOUL				2350.5	2353.2	1	2350.5	2353.2	1	III
04	0000	0130	BOUL										
	0045	0619	MANI										
	0526	1745	DURN	0526 D	1745 E	1	0526 D	1745 E	1				IC,N
	0609	1810	DWIN				0609	1810	1				IS
	0705	1009	MANI										
			DWIN				0747.9		1				IIIB
			DWIN				1301	1306	2				IIIG
	1024	2309	SGMR							1529.6	1529.8	1	III
			SGMR							1836.6	1837.2	1	III
	1400	2400	BOUL				1836.6	1837.8	1	1836.6	1837.8	1	III
	1316	2345	HARV				1836	1837	3	1836	1837	1	IIIG
			BOUL				2015.7	2016.4	2	2015.7	2016.4	2	III
			SGMR							2015.9	2016.2	1	III
			HARV				2016		3	2016		3	IIIG
			BOUL				2042.3	2043.2	1	2042.3	2043.2	1	III
	2152	2400	MANI										
05	0000	0130	BOUL										
	0000	1009	MANI							0459.8	0500.4	2	III
	0622	0740	DWIN				0622	0740	1				IN
	0525	1745	DURN	0817.3	0817.3		0817.3	0817.3					IIIW
	0700	1719	WEIS				1145.3	1146.4	3				IIIB
	1022	2310	SGMR							1145.9	1146.5	1	III
			DURN	1622.7	1622.8	2	1622.7	1622.8	2				III
	1230	2400	BOUL				1826.6	1827.2	2	1826.2	1827.2	2	III
			SGMR							1826.7	1827.0	1	III
	1302	2345	HARV				1826	1827	3	1826	1827	3	IIIG
	2150	2400	MANI										
			BOUL				2152.9	2205.3	3	2201.0	2215	3	II
			BOUL				2158.1	2159	2	2158.1	2211.3	2	II
			HARV				2158	2211	2	2201.8	2211	2	II
			SGMR							2200.9	2203.1	1	CONT
			BOUL				2202.7	2305	2	2202.7	2305	2	IV
			BOUL				2328.1	2329.6	1	2328.1	2329.6	1	III
			BOUL							2349.0	2352.2	1	IIIG
06	0000	0130	BOUL										
	0000	1009	MANI										

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

APRIL 1976

APR 1976	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT	
06	0524	0557	DURN										
	0747	0817	DWIN										
	1101	1538	DWIN				1101	1538	1				IN
			DWIN				1209	1212	2				IIIG
	0609	1748	DURN	1211.3	1211.8	3	1211.5	1211.7	3				IIIG,RS
	0656	1719	WEIS				1211.7	1212.2	2				IIIB
	1021	2311	SGMR							1212.0	1212.2	1	III
			DWIN				1249.4	1249.8	2				IIIG
			DWIN				1410.0	1414.0	2				IIIGG
			WEIS				1410.3	1413.5	2				IIIGG
	1230	2400	BOUL				1410.3	1415.0	2	1410.3	1415.0	2	IIIG
			SGMR							1410.7	1413.2	2	IIIG
			DURN	1411.2	1413.4	3	1411.2	1413.4	3				IIIGG
	1301	2345	HARV				1411	1414	2	1411	1412	1	IIIG
			SGMR							1449.9	1450.5	1	III
			DWIN				1519.1	1520.0	1				IIIG
			WEIS				1559.6	1600.7	2				IIIG
			SGMR							1559.9	1601.0	2	III
			HARV				1559	1601	2	1600	1601	2	IIIG,V
			BOUL				1600.0	1600.5	2	1600.0	1600.5	2	III
			BOUL				1925.5	1927.2	2	1925.5	1927.2	2	III
			SGMR							1925.8	1926.0	1	III
			HARV				1925	1926	3	1925	1926	3	IIIG,V
			BOUL				2007.5	2007.7	1	2007.5	2007.7	1	III
	2149	2400	MANI										
			BOUL				2203.3	2204.0	2	2203.3	2204.0	2	III
			SGMR							2203.4	2203.6	1	III
			HARV				2203	2204	2	2203	2204	2	IIIG
07	0000	1009	MANI										
	0130	2400	BOUL										
	0813	1313	DWIN				0813	1313	1				IS
			DWIN				0822.4	0822.8	2				IIIG
	0651	1719	WEIS				0822.4	0823.1	2				IIIG
	0524	1750	DURN	0822.5	0822.7	1	0822.5	0822.7	1				IIIG
			DWIN				0924.1	0924.5	1				IIIG
			DWIN				1031.0	1031.2	2				IIIG
			WEIS				1043.7	1043.8	1				IIIB
			DWIN				1121.0	1122.0	2				IIIG
	1019	2312	SGMR							1121.0	1122.5	1	V
			WEIS				1121.1	1122.6	2				IIIG
			DURN				1121.8	1121.9					IIIGW
			DWIN				1130.5	1130.6	1				IIIG
			WEIS				1130.6	1130.7	2				IIIB
			DWIN				1132.9	1133.5	3				IIIG
			SGMR							1132.9	1133.6	2	III
			DURN	1133.0	1133.1	1	1133.0	1133.1	3				IIIRS
			WEIS				1142.9	1143.5	3				IIIG
			DWIN				1208.2	1209.3	2				IIIG
			WEIS				1208.3	1209.5	1				IIIG
			SGMR							1208.5	1212.4	1	IIIG
			WEIS				1211.9	1212.2	1				IIIB
			WEIS				1318.2	1218.8	1				IIIG
			SGMR							1318.2	1319.3	2	V
			WEIS				1418.5	1423.5	1				IIIG
			SGMR							1418.6	1421.0	1	IIIG
	1301	2345	HARV				1420	1421	3				IIIG
	1437	1547	DWIN				1437	1547	1				IS
	1500	2400	BOUL				1517.9	1518.2	1	1517.9	1518.2	1	III
			WEIS				1521.7	1523.2	2				IIIG
			DWIN				1521.9	1523.1	2				IIIG
			BOUL				1521.9	1523.4	2	1521.9	1523.4	2	III
			SGMR							1522.2	1523.4	2	V
			HARV				1522	1523	3	1522	1523	2	IIIG
			BOUL				1530	1657	1				IS
			BOUL				1657	2200	2				IS
			DURN	1711.2	1713.5	1							DCIM
			DURN	1714.3	1714.9	1	1714.9	1714.9	1				III
			BOUL				1723	1920	1				CONT
			HARV				1822	1922	1				IN

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

APRIL 1976

APR 1976	TIMES OF OBSERVATION START UT	TIMES OF OBSERVATION END UT	STATION	EVENTS DECIMETRIC BAND START UT	DECIMETRIC BAND END UT	DECIMETRIC BAND INT	METRIC BAND START UT	METRIC BAND END UT	METRIC BAND INT	DEKAMETRIC BAND START UT	DEKAMETRIC BAND END UT	DEKAMETRIC BAND INT	SPECTRAL TYPE
07			BOUL				1931.5	1932.0	1	1931.5	1932.0	1	III
			HARV				1931	1932	2	1931	1932	1	IIIB
	2149	2400	MANI										
			BOUL				2333.0	2334.0	1	2333.0	2334.0	1	III
08	0000	0130	BOUL										
	0000	1009	MANI										
	0521	1750	DURN										
	0529	1515	WEIS										
	0737	0800	DWIN										
	1017	2313	SGMR										
	1033	1214	WEIS										
	1041	1557	DWIN										
	1230	2400	BOUL										
	1236	1718	WEIS										
	1302	2345	HARV										
	2148	2400	MANI										
09	0000	0009	MANI										
	0000	0130	BOUL										
	0250	1009	MANI										
	0519	1752	DURN										
	0528	1715	WEIS										
	0828	1546	DWIN				1249.6	1250.1	1				IIIG
	1016	2315	SGMR							1249.9	1250.3	2	III
	1230	2400	BOUL							1749.2	1749.7	1	III
	1301	2345	HARV				1749	1750	2				IIIG
	2148	2400	MANI										
10	0000	1009	MANI										
	0000	0130	BOUL										
	0528	0911	WEIS										
	0718	1753	DURN										
	1009	1718	WEIS										
	1014	2315	SGMR										
	1230	2400	BOUL										
	1302	2345	HARV										
	2148	2400	MANI										
11	0000	1009	MANI										
	0000	0130	BOUL										
	1012	2317	SGMR										
	1230	2400	BOUL										
	1302	2345	HARV										
	1454	1754	DURN										
	2147	2400	MANI										
12	0000	1009	MANI										
	0000	0130	BOUL										
	0514	1755	DURN										
	0705	1718	WEIS										
	0745	1220	DWIN				0847.1		1				IIIB
	1011	2318	SGMR										
			DWIN				1201.5		1				IIIB
	1302	2345	HARV										
	1530	2400	BOUL										
	2146	2400	MANI										
13	0000	1009	MANI										
	0000	0130	BOUL										
	0512	1757	DURN										
	0700	0739	WEIS										
	1009	2319	SGMR										
	1230	2400	BOUL										
	1302	2345	HARV										
	1300	1540	DWIN				1341.0	1341.2	1				IIIG
	1645	1718	WEIS										
	2145	2400	MANI										
14	0000	1009	MANI										

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

APRIL 1976

APR 1976	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT	
14	0000	0200	BOUL										
	0511	0550	DURN										
	0601	0955	DURN	0727.6	0727.7	2							III
	1007	2320	SGMR										
	1056	1239	WEIS										
	1159	1757	DURN										
	1302	2345	HARV										
	1303	1352	WEIS										
	1359	1448	WEIS										
	1646	1733	WEIS										
	2046	2400	BOUL										
	2145	2400	MANI										
15	0000	1009	MANI										
	0000	0200	BOUL										
	0509	1755	DURN	0350	1755 E	2	1644	1755 E	1				IC,N
	1006	2321	SGMR										
	1114	1733	WEIS										
	1230	2400	BOUL										
	1302	1858	HARV				1632	1633	2				IIIB
	1921	2345	HARV										
	2145	2400	MANI										
16	0000	1009	MANI										
	0000	0200	BOUL										
	0508	1757	DURN	0833.1	0833.3	2	0833.1	0833.3	3				IIIG
	0402	1636	WEIS				0833.2	0833.4	1				IIIG
			DURN	1006.5	1006.7	3	1006.5	1006.7	3				IIIG
			DURN	1012.7	1013.2	2	1012.7	1013.2	2				IIIG
			DURN	1028.5	1029.2	3	1028.5	1029.2	3				IIIG
			WEIS				1029.1	1029.4	2				IIIG
			DURN	1340	1757 E	2	1340	1757 E	1				IC,DC,N
			DURN	1429.4	1430.0	3	1429.4	1430.0	2				III
			WEIS				1429.5	1429.6	1				IIIB
	1230	2400	BOUL				1429.5	1429.9	2				III
	1005	2323	SGMR							1429.6	1430.5	1	III
	1302	2345	HARV				1429	1430	2	1429	1430	1	IIIG
			DURN	1642.9	1643.2	3	1642.9	1643.2	3				IIIG
			SGMR							1643.0	1643.8	2	III
			BOUL				1643.0	1644.0	2	1643.0	1644.0	2	III
			HARV				1643		3	1643		3	IIIG,V
	1705	1736	WEIS				1731.2	1731.5	3				IIIB
			DURN	1731.2	1731.2	3	1731.2	1731.5	3				IIIG
			SGMR							1731.3	1732.0	2	V
			BOUL				1731.3	1732.2	2	1731.3	1732.2	2	IIIG
			HARV				1731	1732	3	1731	1732	3	IIIG,V
			DURN	1748.6	1748.7	2							III
			BOUL				1901.4	1902.2	1	1901.4	1902.2	1	III
			SGMR							1901.7	1902.0	1	V
			HARV				1901	1902	3	1901	1902	3	IIIB
			BOUL				1916.8	1919.2	1	1916.8	1919.2	1	IIIG
			HARV				1917	2004	1				IN
			HARV				1918	1920	2	1918	1920	1	IIIG
			HARV				2004	2152	1				I
	2145	2400	MANI										
17	0000	1009	MANI										
	0000	0200	BOUL										
	0506	1756	DURN	0506 D	1400	1	0506 D	0800	1				IC,DC,N
	1008	1736	WEIS				1013.5	1013.8	1				IIIB
	1302	2345	HARV										
			DURN	1313.3	1313.5	1	1313.3	1313.5	1				IIIG
	1200	2400	BOUL				1313.5	1314.1	1	1313.5	1314.1	1	III
	1003	2324	SGMR							1313.7	1314.1	1	III
			DURN				1340.2	1340.3	1				III
			BOUL				1340.7	1341.9	1	1340.7	1341.9	1	III
			SGMR							1429.9	1430.4	1	III
	2144	2400	MANI										
18	0000	1009	MANI										

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

APRIL 1976

APR 1976	TIMES OF OBSERVATION START UT	TIMES OF OBSERVATION END UT	STATION	EVENTS DECIMETRIC BAND START UT	DECIMETRIC BAND END UT	DECIMETRIC BAND INT	METRIC BAND START UT	METRIC BAND END UT	METRIC BAND INT	DEKAMETRIC BAND START UT	DEKAMETRIC BAND END UT	DEKAMETRIC BAND INT	SPECTRAL TYPE
18	0000	0200	BOUL										
	0503	1730	WEIS										
	0505	1002	DURN	0810	1002 E								I,W,N
	1001	2325	SGMR										
	1010	1754	DURN				1051.1	1051.4	2				IIIG
			DURN	1110	1754 E	1	1740	1754 E	1				I,DC,N
	1200	2400	BOUL										
	1302	2345	HARV										
			DURN	1413.7	1413.8	1	1413.7	1413.8	1				IIIG,U
	2143	2400	MANI										
19	0000	1009	MANI										
	0000	0200	BOUL										
	0504	1756	DURN	0504 D	1756 E	2	1030	1756 E	1				IC,DC,N
			DURN	0829.9	0829.9	1							III,RS
	0959	2326	SGMR										
	1200	2400	BOUL										
	1302	2345	HARV										
	1319	1739	WEIS										
			DURN	1429.4	1429.4	2							IIIG
	2143	2400	MANI										
20	0000	1009	MANI										
	0000	0200	BOUL				0107.2	0107.4	2				III
	0502	1756	DURN	0502 D	1756 E	1	0502 D	1756 E	1				IC,N
			DURN	0520.4	0520.5	2	0520.4	0520.5	2				IIIG
			DURN	0535.1	0535.1	2	0535.1	0535.1	2				III
			DURN	0537.7	0538.1	3	0537.7	0538.1	2				IIIG
			DURN	0545.4	0550.3	3	0545.4	0550.3					IIIGG
			DURN	0555.5	0556.0	3	0555.5	0556.0	2				IIIG
			DURN	0618.0	0633.0	3	0618.0	0633.0	3				IIIGG
			DURN	0652.7	0701.0	3	0652.7	0701.0	3				IIIGG
			DURN	0713.6	0717.6	3	0714.2	0717.6	3				IIIGG
			DURN	0734.3	0740.5	1	0734.3	0740.5	1				IIIGG
			DURN	0757.0	0757.7	1	0757.0	0757.7	3				IIIGG
	0504	0946	WEIS				0757.5	0757.9	1				IIIG
			DURN	0810.3	0816.0	2	0812.3	0816.0	1				IIIG
			DURN	0839.8	0900	3	0839.8	0900	3				IIIGG
			DURN	0905.2	0910.9	2	0909.3	0910.9	1				IIIG,N
			DURN	0945.7	1005.1	3	0945.9	1005.1	3				IIIG,N
			DURN	1103.3	1103.3	1	1102.8	1104.3	1				IIIG
			DURN	1230.4	1256.3	3	1233.6	1256.3	3				IIIGG
	1200	2400	BOUL				1245	1256.1	1				IS
			BOUL				1255.9	1256.1	1				III
			DURN	1349.3	1349.5		1347.9	1349.5					IIIG,W
			DURN	1425.6	1426.8	2	1425.5	1426.8	3				IIIG
			BOUL				1426.8	1427.0	1				III
			DURN	1457.7	1457.7		1457.7	1457.7					IIIW
	1530	1741	WEIS										
			DURN	1536.3	1613.3	3	1536.3	1613.3	3				IIIG,N
			DURN	1640	1756 E	3	1640	1756 E	3				IIIG,N
			BOUL				1714.3	1715.0	1				III
			BOUL				1738.7	1739.7	1	1738.7	1739.7	1	III
	0957	2327	SGMR							1738.8	1739.1	1	III
			DURN	1746.3	1755.5	3							DCIM
			BOUL				1748.3	2040	2	1752.6	2040	2	IV
	1302	2345	HARV				1802.5	1814	2	1806	1814	2	II
			SGMR							1936.3	1956.0	2	CONT
			HARV				1806	1906	2	1813	1906	2	I
			HARV				1806	1812	2				IIIGG
			HARV				1815	1815	3	1815	1815	3	IIIG,V
	2143	2400	MANI										
21	0000	1009	MANI										
	0000	0200	BOUL										
	0442	1343	WEIS										
	0500	1755	DURN	0500 D	1755 E	3	0500 D	1755 E	3				IC,DC,N
	0956	2328	SGMR										
	1022	1230	DWIN				1022	1230	1				IS
			DWIN				1055.0		1				IIIB

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

APRIL 1976

APR 1976	TIMES OF OBSERVATION START UT	TIMES OF OBSERVATION END UT	STATION	EVENTS DECIMETRIC BAND START UT	DECIMETRIC BAND END UT	DECIMETRIC BAND INT	METRIC BAND START UT	METRIC BAND END UT	METRIC BAND INT	DEKAMETRIC BAND START UT	DEKAMETRIC BAND END UT	DEKAMETRIC BAND INT	SPECTRAL TYPE
21			DWIN				1112.3	1112.8	2				IIIG
			DURN	1112	1122	1	1112	1122	1				III,N
			DWIN				1121.2	1121.5	2				IIIG
			DWIN				1127.7	1129.0	1				IIIG
			DWIN				1217.7	1218.5	2				IIIG
			DURN	1523.6	1528.5	3	1521.2	1528.5	3				IIIGG,DCIM
	1302	2345	HARV	1523	1524	2	1523	1526	2				IIIGG
	1345	1742	WEIS				1524.0	1524.6	3				IIIGG
			WEIS				1525.7	1526.7	1				IIIG
			DURN	1537.0	1537.5	3							IIIG
			DURN	1545.7	1549.5	2	1545.7	1549.5	1				IIIG
	1630	2400	BOUL										
	2143	2400	MANI										
22	0000	1009	MANI										
	0000	0200	BOUL										
	0447	1743	WEIS										
	0459	0807	DURN	0459 D	0807 E	3	0459 D	0807 E					IC,DC,N
			DURN	0531.6	0537.7	3	0531.6	0537.7	2				IIIGG
	0821	1757	DURN	0821 D	1757 E	3	0821 D	1757 E	3				IC,DC,N
	0955	2329	SGMR										
	1302	2345	HARV				1528	1543	1				I
	1200	2400	BOUL				1855.6	1856.1	1	1855.6	1856.1	1	III
			HARV				1856		2	1856		2	IIIB
			BOUL				2016.6	2016.7	1				III
	2143	2400	MANI										
23	0000	0550	MANI										
	0000	0200	BOUL										
	0415	1744	WEIS										
	0459	1757	DURN	0459 D	1757 E	2	0459 D	1757 E	2				IC,DC,N
	0720	1002	MANI										
	0953	2330	SGMR										
	1037	1222	DWIN				1056.7	1056.8	1				IIIG
			DWIN				1122.5	1123.2	2				IIIG
			DWIN				1127.8	1128.0	1				IIIG
	1302	2345	HARV										
	1200	2400	BOUL				1314.9	1315.0	1				III
	2141	2400	MANI										
24	0000	1009	MANI										
	0000	0200	BOUL										
	0431	1421	WEIS										
	0459	1755	DURN	0459 D	1755 E	1	0459 D	1755 E	1				IC,DC,N
	1200	2400	BOUL				1331.0	1332.7	1	1331.0	1332.7	1	III
			BOUL				1600.2	1602.0	1	1600.2	1602.0	1	III
	0952	2331	SGMR							1600.4	1601.2	1	III
	1302	2345	HARV				1600	1601	2				IIIG
			BOUL				1823.1	1823.2	1				III
			BOUL				1834.6	1835.0	1				IIIG
			HARV				1834	1835	2				IIIG
	2140	2400	MANI										
25	0000	1009	MANI										
	0000	0200	BOUL										
	0458	1756	DURN	0458 D	1756 E	1	0498 D	1756 E	1				IC,DC,N
	0951	2333	SGMR										
	1200	2400	BOUL										
	1302	2245	HARV										
	2140	2400	MANI										
26	0000	1009	MANI										
	0000	0200	BOUL										
	0456	0825	DURN	0456 D	0825 E	1	0456 D	0825 E	1				IC,DC,N
	0839	1755	DURN	0839 D	1600		0839 D	1600					IC,DC,N,W
	0857	0927	DWIN				0857	0927	1				IN
	1126	1422	DWIN				1126	1422	1				IN
	1200	2400	BOUL										
			DWIN				1230.2		1				IIIB
	0735	1749	WEIS				1345.3	1345.5	2				IIIG

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

APRIL 1976

APR 1976	TIMES OF OBSERVATION START UT	TIMES OF OBSERVATION END UT	STATION	EVENTS: DECIMETRIC BAND START UT	DECIMETRIC BAND END UT	DECIMETRIC BAND INT	METRIC BAND START UT	METRIC BAND END UT	METRIC BAND INT	DEKAMETRIC BAND START UT	DEKAMETRIC BAND END UT	DEKAMETRIC BAND INT	SPECTRAL TYPE
26			DWIN				1354.5	1355.2	2				IIIG
	0949	2334	SGMR							1355.1	1355.6	1	III
	1302	2245	HARV				1355		2				IIIB
	2139	2400	MANI										
27	0000	1009	MANI										
	0000	0230	BOUL										
	0948	2335	SGMR										
	0959	1515	DWIN				1018.7	1019.0	1				IIIG
			DWIN				1029.2	1029.5	1				IIIG
	0441	1500	WEIS				1030.4	1030.7	2				IIIB
			DWIN				1030.7	1031.1	2				IIIG
	1200	2400	BOUL										
	0456	1755	DURN	1225 D	1755 F								IC,DC,N,W
			DWIN				1226.3	1233.0	1				IIIG
	1302	2245	HARV										
	1522	1715	WEIS										
	2139	2400	MANI										
28	0000	0230	BOUL										
	0000	1010	MANI										
	0440	1350	WEIS										
	0453	1757	DURN										
	0946	2336	SGMR										
	0857	1015	DWIN				1004.5		1				IIIB
	1200	2400	BOUL										
	1302	2245	HARV										
	1504	1752	WEIS										
	2139	2400	MANI										
29	0000	1010	MANI										
	0000	0200	BOUL										
	0452	1754	DURN	0532.1	0532.4	2							IC,DC
	0700	1753	WEIS										
	0825	1225	DWIN				0825	0910	1				IN
			DWIN				0834.4	0834.6	2				IIIG
	0945	2337	SGMR										
	1302	2245	HARV										
			DURN	1510	1754 F		1510	1754 E					I,N,W
	1200	2400	BOUL				1955	2130	1				IV
	2137	2400	MANI										
30	0000	1010	MANI										
	0000	0200	BOUL				0055.8	0056.8	2	0055.8	0056.8	2	IIIG
	0440	0945	WEIS				0443.2	0444.7	2				IIIGG
	0450	0558	DURN										
	0609	1818	DURN	0754.6	0754.8	2	0754.6	1754.8	2				IIIG
			DURN	0813.9	0816.4	2	0813.9	0816.4	2				IIIG
			DURN	0839.9	0845.3	2	0839.9	0844.3	2				IIIG,DCIM
	1024	1754	WEIS				1033.5	1033.8	1				IIIG
			WEIS				1242.7	1246.6	3				IIIGG
			DURN	1242.7	1248	3	1242.7	1247.3	3				IV
			WEIS				1243.0	1247.0	2				IV
	0943	2338	SGMR							1243.3	1248.2	2	IIIG
	1200	2400	BOUL				1244.1	1245.0	1				IIIG
			DURN	1252.8	1253.2	1	1252.8	1253.2	1				IV
			DURN	1257.4	1301.3	3	1257.4	1301.0	3				IIIGG
			WEIS				1300.2	1301.2	2				IIIG
	1248	2245	HARV				1300	1301	1				IIIG
			BOUL				2103.0	2400 O	2	1030 I	400	3	IV
			SGMR							2103.2	2130.0	2	IV
			HARV				2103	2107	3	2103	2107	3	IIIGG,V,U
			HARV	2103	2159	2							IVN
			HARV				2106.5	2129	3	2107	2129	3	II
			SGMR							2130.0	2338.0	2	CONT
			HARV				2134	2156	1	2134	2155	1	IN
	2137	2400	MANI										
			HARV				2212	2214	1				IIIG

The symbols used in connection with the spectral type in describing the important bursts are as follows:

B = Single burst
G = Small group (< 10) of bursts
GG = Large group (> 10) of bursts
C = Underlying continuum (particularly with type I)
S = Storm in the sense of intermittent but apparently connected activity
N = Intermittent activity in this period
U = U-shaped burst of Type III
RS = Reverse slope burst
DP = Drifting pairs
DC = Drifting Chains
H = Herringbone
W = Weak
P = Pulsations
CONT = Continuum
UNCLF = Unclassified activity

COSMIC RAY INDICES

(Neutron Monitors)

APRIL 1976

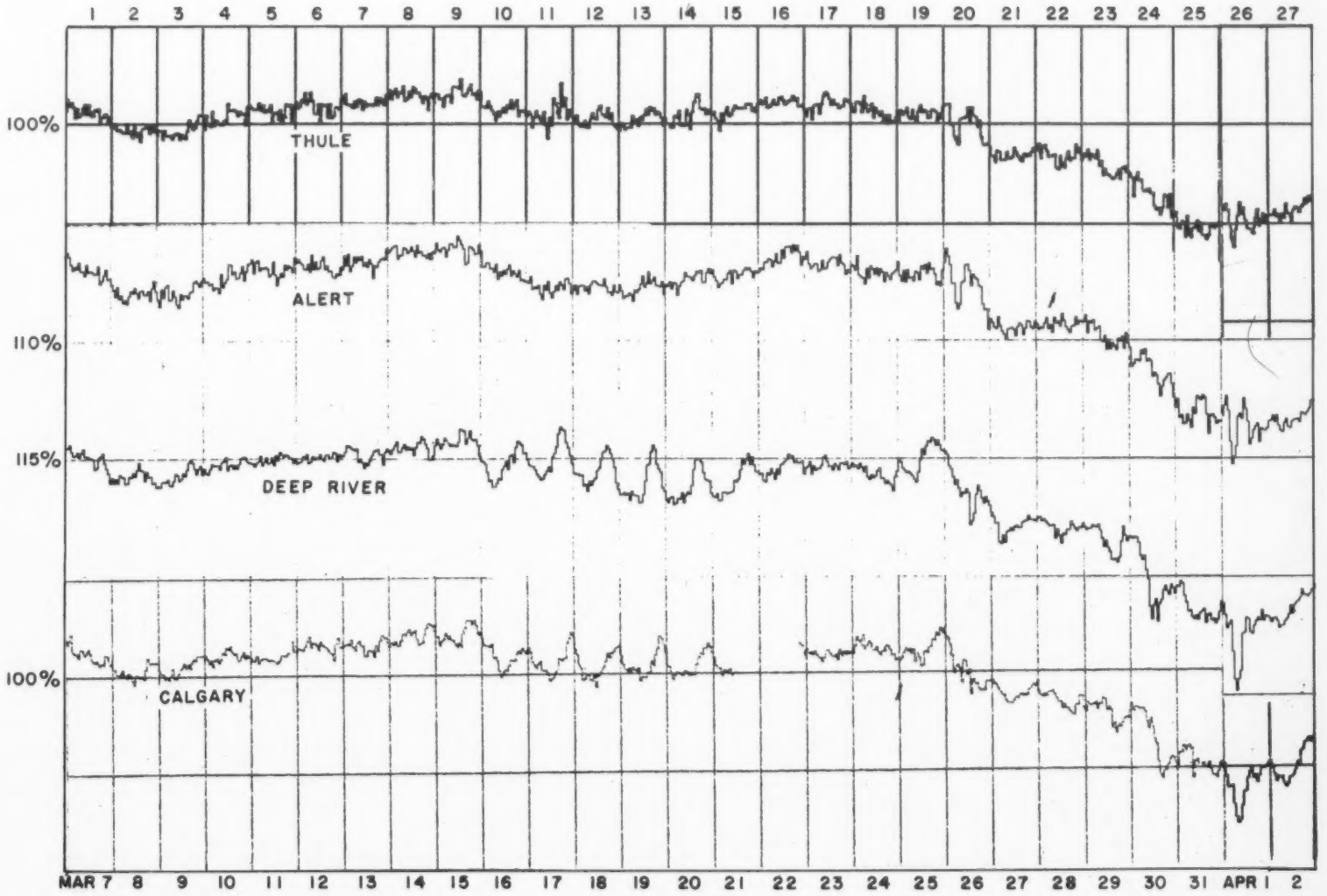
Apr. 1976	THULE Average cts/hr	ALERT Average cts/hr	DEEP RIVER Average cts/hr	CALGARY Average cts/hr	SULPHUR MT Average cts/hr	KIEL Average cts/hr	CLIMAX Average cts/hr	TOKYO Average cts/hr
1	4282.9	7101.3	6623.1	11002.9	8354.4	6006.3	4012.2	3496.6
2	4305.8	7123.5	6684.6	11118.7	8462.9	6026.0	4025.7	3504.8
3	4354.5	7210.0	6752.2	11277.1	8562.3	6102.8	4075.5	3522.2
4	4405.2	7289.4	6864.8	11429.7	8715.3	6169.9	4132.5	3546.8
5	4461.3	7372.3	6952.8	11573.6	8852.5	6221.7	4183.0	3563.1
6	4484.3	7421.0	6988.0	11630.6	8912.2	6261.5	4216.3	3563.8
7	4510.7	7454.2	7025.4	11649.2	8964.4	6311.4	4228.6	3566.8
8	4522.7	7468.2	7037.5	11724.3	8980.2	6312.0	4224.7	3565.0
9	4533.4	7487.9	7040.8	11724.6	9012.6	6308.4	4228.5	3560.7
10	4539.0	7488.0	7039.8	11709.4	9013.3	6297.9	4225.6	3560.5
11	4538.4	7484.8	7044.2	11759.2	9010.7	6305.7	4210.6	3557.7
12	4537.7	7477.1	7015.8	11698.8	8985.8	6298.8	4198.5	3538.5
13	4539.8	7495.9	7009.8	11638.8	8951.8(22)	6286.7	4200.2	3531.5
14	4520.9	7460.6	7000.0	11685.3	8872.1	6291.6	4196.3	3541.8
15	4519.8	7446.4	6975.3	11674.6	8925.6	6274.0	4208.0	3552.6
16	4515.7	7441.0	6963.8	11665.5	8894.3	6269.7	4218.9	3548.2
17	4531.7	7460.5	6971.8	11716.0	8896.1	6272.1	4220.2	3549.6
18	4547.3	7484.6	7002.8	11755.2	8956.4	6287.2	4219.4	3554.1
19	4540.0	7467.9	7011.0	11726.4	8972.6	6292.8	4217.7	3552.0
20	4551.5	7475.2	7037.8	11802.8	9024.1	6304.1	4192.7(6)	3543.6
21	4572.0	7508.3	7045.0	11775.3	9038.7	6333.0	-- (0)	3545.0
22	4552.1	7485.2	7045.0	11782.4	9043.4	6353.3	-- (0)	3553.2
23	4560.3	7495.3	7059.8	11779.3	9030.3	6352.1	-- (0)	3549.5
24	4567.0	7501.6	7060.9	11786.9	9025.0	6339.5	-- (0)	3544.5
25	4553.9	7470.6	7058.3	11757.2(23)	9029.3	6322.6	-- (0)	3541.7
26	--	7462.7	7052.6	11741.8	8992.8	6318.8	4224.9(36)	3541.5
27	--	7420.3	7023.1	11682.2	8947.2	6290.0	4229.6	3534.9
28	--	7415.3	7001.5	11670.5	8938.8	6288.0	4245.1	3535.9
29	--	7420.4	7009.7	11674.1	8952.5	6284.0	-- (0)	3531.8
30	--	7441.5	7020.9	11704.1	8965.6	6283.1	- (0)	3527.2
MEAN	4501.9	7424.4	6980.6	11643.9	8909.4	6268.8	4188.5	3544.2

( ) Number of hours for which data are available if less than 24. Number of Section Hours at Climax if sum of both sections is less than 40 hours.

Thule, Alert, Calgary, Sulphur Mountain, Kiel and Climax Scaling Factors = 100.
Deep River Scaling Factor = 300.
Tokyo Scaling Factor = 128.

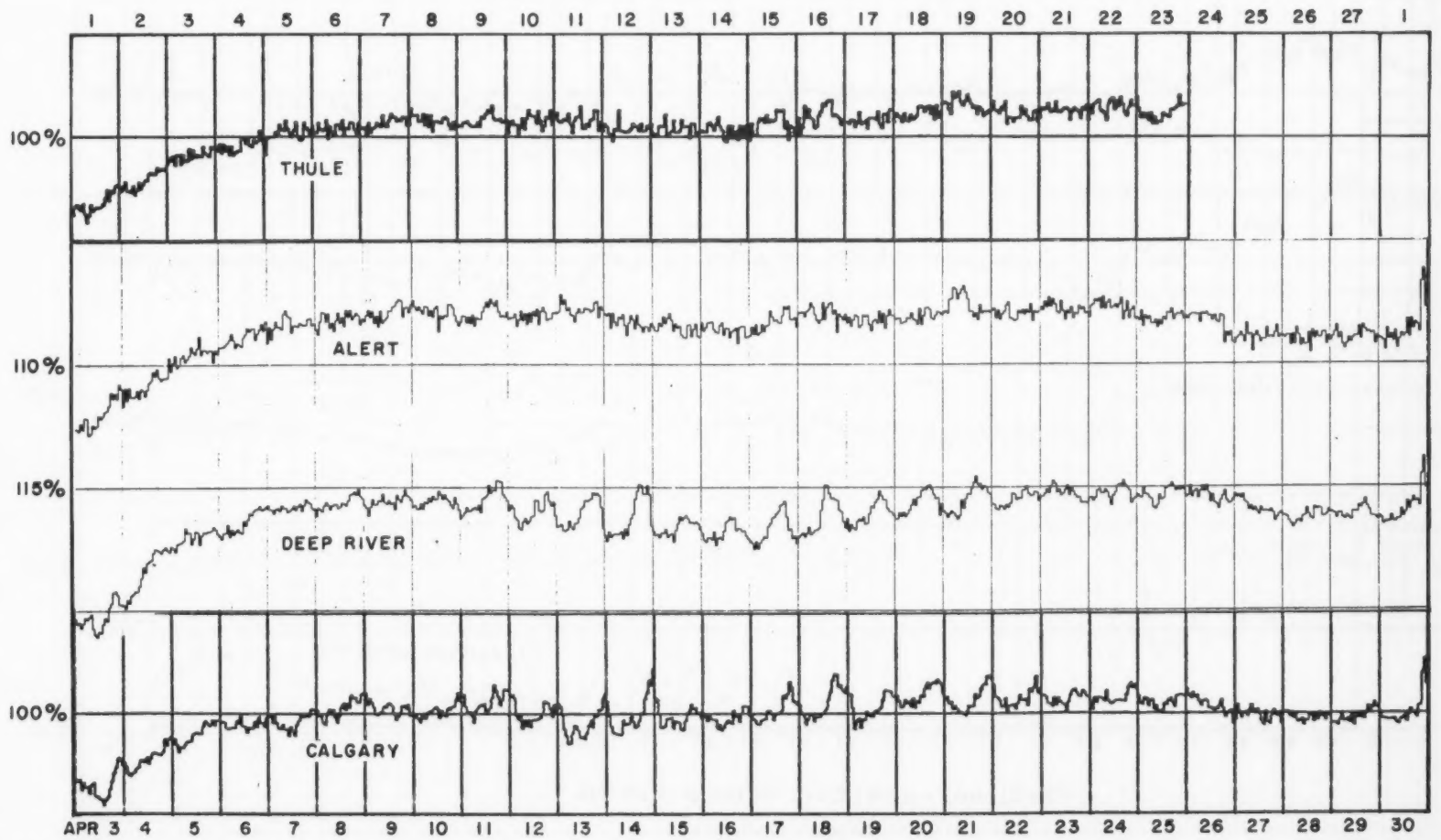
COSMIC RAY INDICES
(Neutron Monitors)

Bartel's Rotation 1950 (MAR – APR 1976)



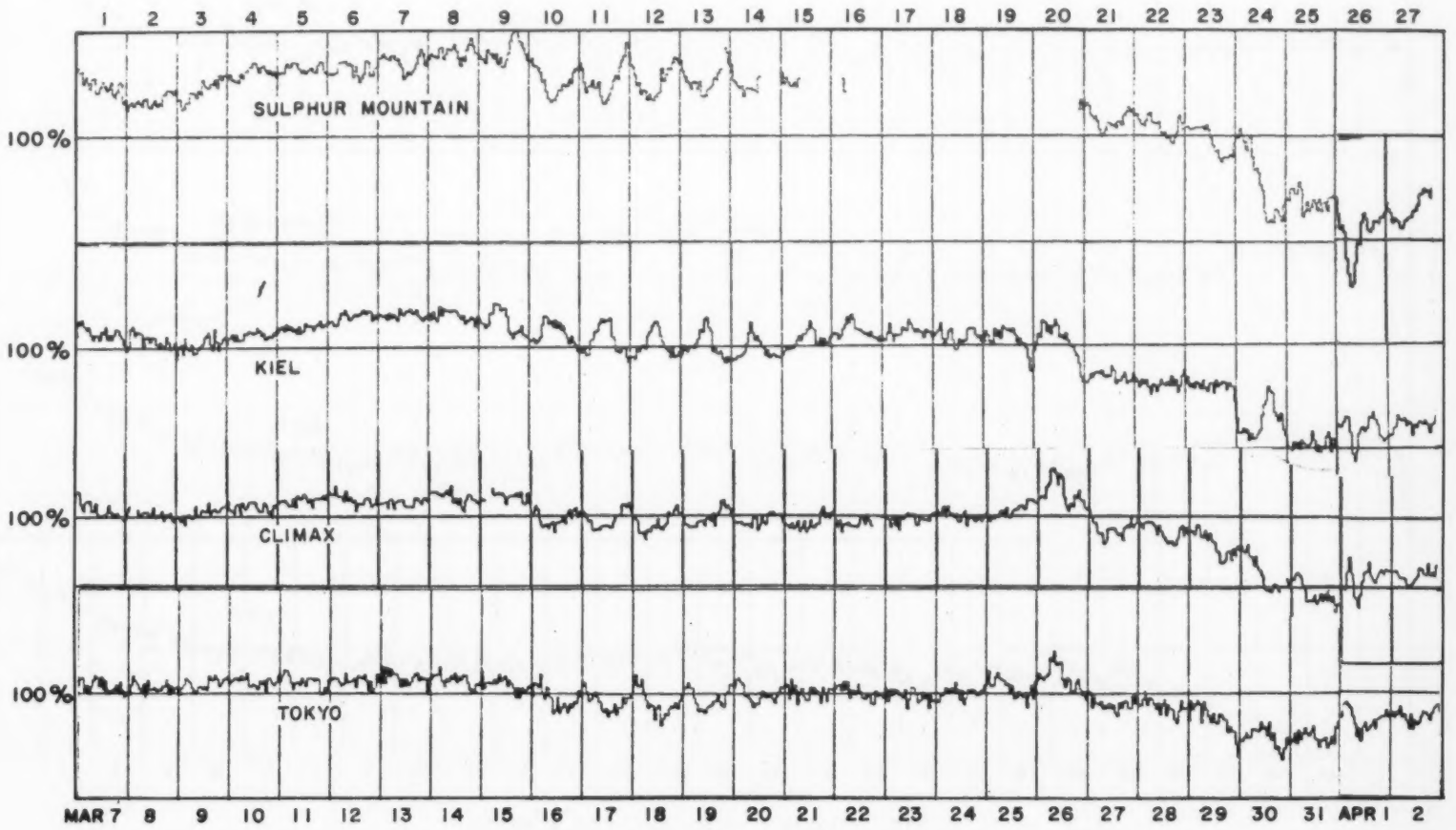
COSMIC RAY INDICES
(Neutron Monitors)

Bartel's Rotation 1951 (APRIL 1976)



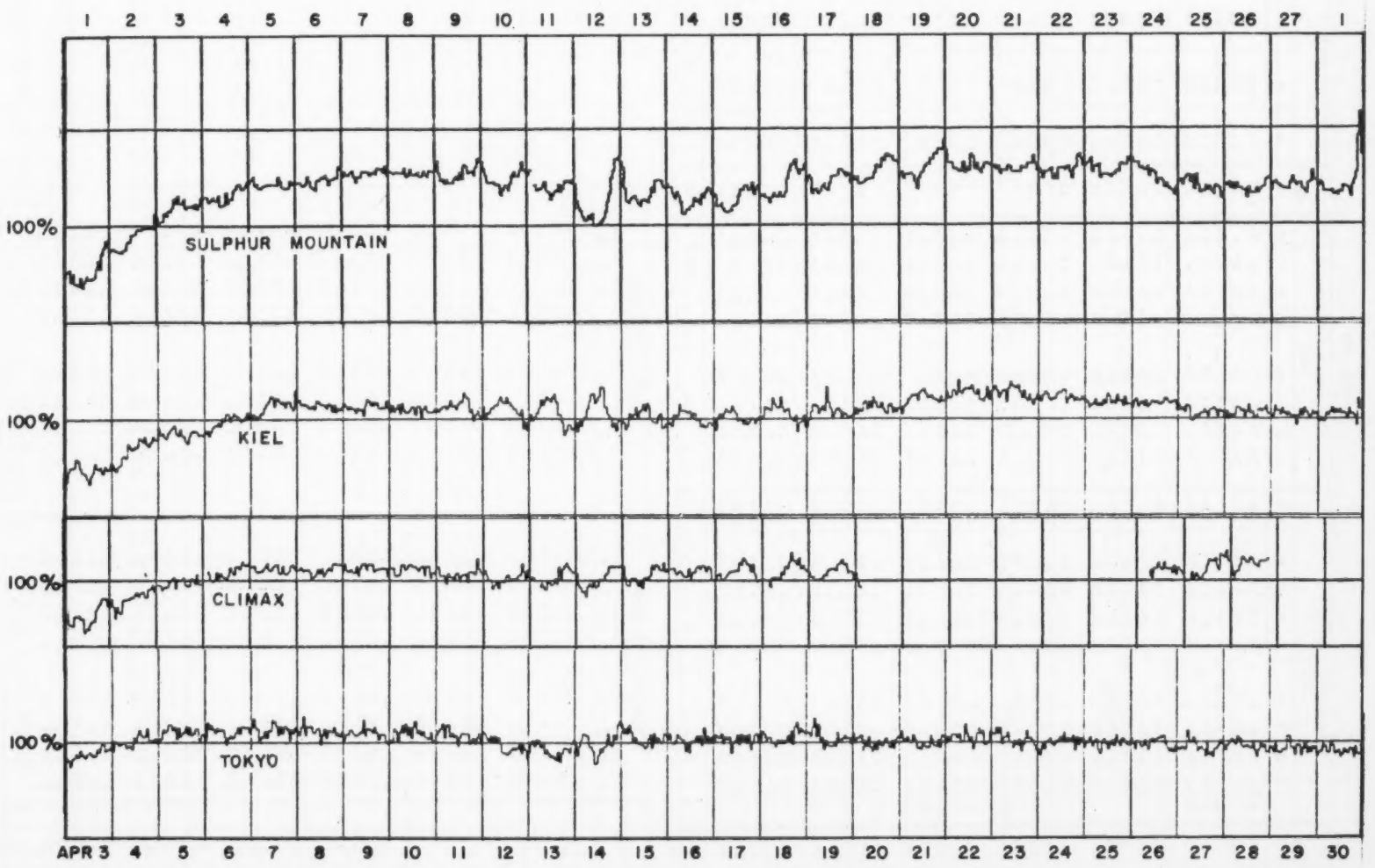
COSMIC RAY INDICES
(Neutron Monitors)

Bartel's Rotation 1950 (MAR-APR 1976)



COSMIC RAY INDICES
(Neutron Monitors)

Bartel's Rotation 1951 (APRIL 1976)



GEOMAGNETIC ACTIVITY INDICES

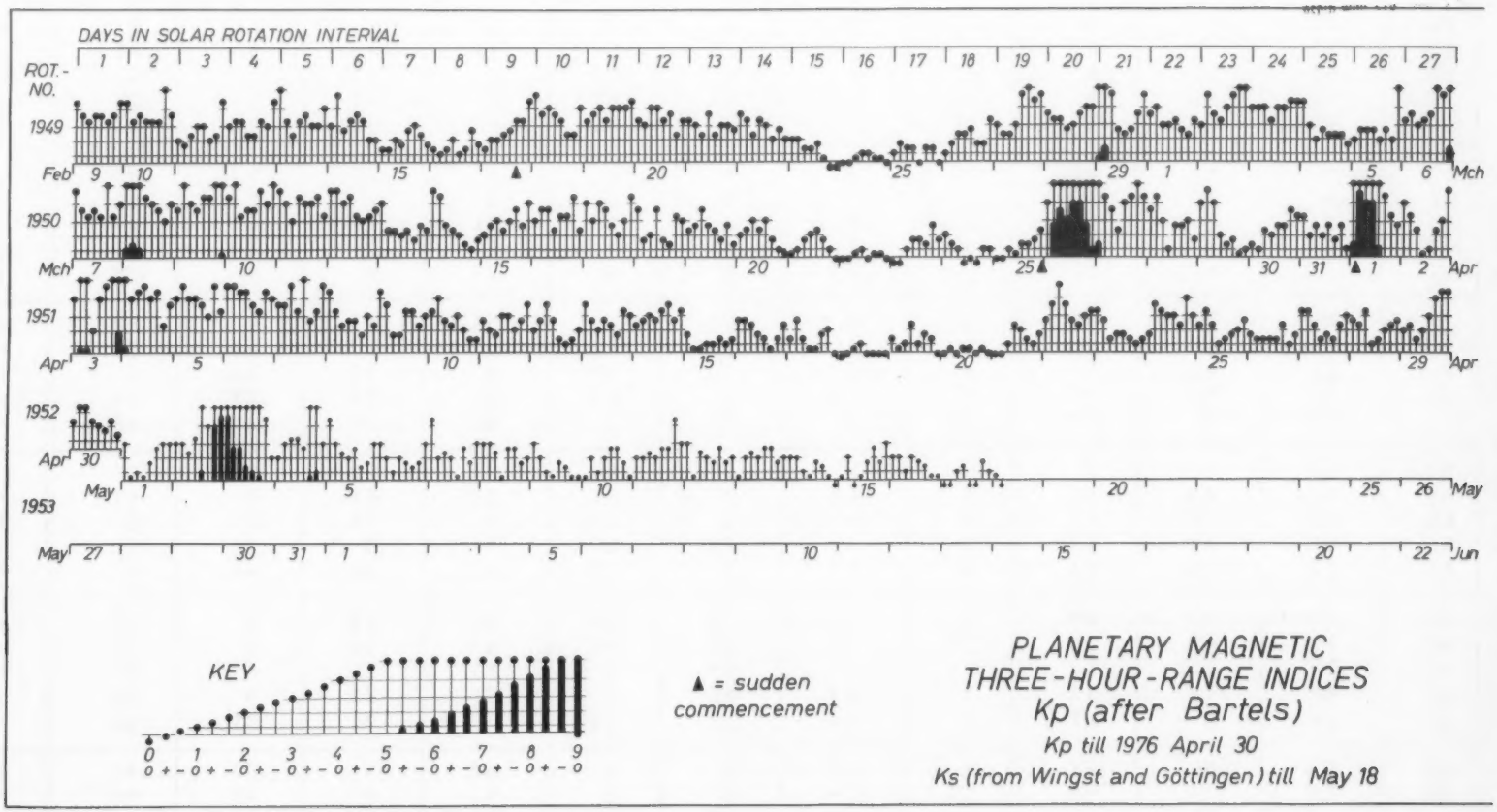
APRIL 1976

Day		Three-Hourly Indices Kp									Three-Hourly Indices Km								Ap	aa					Cp
		1	2	3	4	5	6	7	8	Sum	1	2	3	4	5	6	7	8		N	S	M			
1	D	6	8+	8	8	6-	4+	3+	3-	46+	5+	7-	7	7	5	3+	3	3-	107	90	140	188	42		1.9
2		4	3+	2+	1-	1	2+	3	5-	21+	3+	3	2+	1+	1	2+	3-	4	16	28	18	17	30		0.9
3	D	4	5+	5+	2	4	5-	5	6+	37-	3+	4+	5-	2	4	4	4	5+	44	53	63	45	71		1.5
4	D	5+	4	4+	5-	4	4+	2+	4-	33-	5	4-	4+	4+	4	3+	2+	4-	30	40	57	56	42		1.3
5	D	4	5-	4	4	4-	3	5-	3+	31+	3+	4	3+	3+	3	3-	4	3	27	34	39	39	34		1.2
6	D	5-	5-	4+	4+	4-	3+	4+	4	33+	4-	4	4-	4	4	3	4-	3+	30	40	59	59	40		1.3
7		4-	4-	5-	3+	5	3-	3+	5-	31	4-	3	4-	3+	4+	2+	3+	4	27	41	40	40	41		1.2
8		4+	3+	2+	1-	3-	2-	3	2+	22+	4-	3-	2-	3-	2+	2-	3-	3-	14	32	19	28	24		0.8
9		4+	4-	2-	2-	3+	3+	2+	3	23+	4-	3	1+	1+	3	3	3-	2+	16	30	24	23	32		0.9
10		3+	4	3-	2+	3	2	1+	1+	20	3-	3+	2+	3-	3-	2-	1	1+	12	18	18	22	14		0.7
11		3-	2	2-	3	3	2	3-	4-	21-	2+	1+	2-	3-	3	2+	2+	3	12	26	25	23	29		0.7
12		2	3-	4-	3-	1+	1	1+	2	17-	2	3-	3	3-	2-	1	1	2-	9	18	15	20	13		0.5
13		4-	3-	2	3-	2+	2-	3+	3	21+	3	2	1+	2+	2	2	3-	3-	13	23	16	18	22		0.7
14		2+	3-	3	3-	3+	4-	3-	3+	24-	2	2	3-	2+	3+	3	2+	3	15	32	29	23	39		0.8
15	QQ	2-	1-	1-	1	1	1+	1	1+	9-	1+	1-	1-	1	2-	1	1+	2-	4	10	5	7	8	C	0.1
16	Q	3-	3-	2+	2-	1+	1-	1+	2+	15	2+	2+	2+	2-	1+	1-	1	3-	8	17	9	15	12	CK	0.4
17	Q	1+	3-	1+	1-	1-	2-	2	0+	11-	1+	3-	2	1	1-	2-	2	0+	9	12	13	15	11	KK	0.2
18	QQ	0	0+	1-	1	0+	0+	0+	0+	3+	0	0+	0+	1+	0+	0+	0+	0+	2	6	3	5	4	CC	0.0
19	QQ	1+	1-	1	2+	1	2-	1+	0+	10-	1+	1-	1-	2	1	2-	2-	1-	5	13	8	11	11	CC	0.2
20	QQ	0+	1-	0+	1-	1-	0+	1-	0+	4	0+	1	0+	1	1-	0+	0+	0	2	5	4	4	5	CC	0.0
21	QQ	0+	0+	1	2+	2	1+	1	2-	10	0	0+	1	2+	2	2-	1	2-	5	10	12	10	13	K	0.2
22		3-	4-	5-	4-	3-	2+	3	3+	26	2+	3+	4	3+	3-	2+	3-	3	19	29	34	37	26		1.0
23	Q	3+	3-	1+	2-	2-	1+	1	1+	14+	3	2+	1+	1+	2-	2-	1	1+	8	14	11	13	12	C	0.4
24		2-	4-	3+	3	3	2+	4	3	24	1+	3	3-	3	3+	2+	3+	3-	16	28	34	27	35		0.9
25	Q	2+	3+	2+	1	1+	2-	2	3-	17-	2+	3-	2	1+	2-	2-	2-	2+	9	17	12	14	15		0.5
26	Q	2-	1+	1+	1+	1+	2+	1	2-	12	2-	1+	2-	2	2-	1+	1	2-	6	12	13	12	13	C	0.3
27		3+	3+	2+	1+	2-	1+	2+	3	19-	3	3	2+	1+	2-	2-	2+	3	11	23	19	20	22		0.6
28		3-	2+	3+	1	1+	2	2+	3-	18-	3-	2+	3-	1+	1+	2-	2	3-	10	21	15	18	18		0.5
29		2	2+	1+	2	3	4	4+	4+	23+	2-	2+	2-	3-	3-	4-	4-	4	17	32	24	18	38		0.9
30		2+	3+	3+	2+	2	2-	2+	1+	19-	2+	3+	3	2+	2	2-	2	1+	10	22	18	26	14		0.6
																		Mean		17	25.9	26.5	26.3			0.71

Day	Three-Hourly Indices Kn								Three-Hourly Indices Ks							
	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
1	5-	7-	7-	7-	5	3	3-	3-	6-	7	7+	7+	5-	4-	3+	3
2	3+	3	2+	1+	1-	2+	3	4	4-	3	2	1+	1+	2	3-	4+
3	3	5-	5-	2	4	4-	4	5-	4	4+	5-	2-	4+	4	4+	6-
4	5-	4-	4+	4+	4-	3+	2+	3+	5	4-	4+	5-	4+	4-	2	4+
5	3	4	3	3+	3	2+	4-	3	4-	4	4-	4-	3	3	4+	3+
6	4-	4	3+	4-	3+	3-	4-	3	4-	4-	4	4+	4+	3+	4	4-
7	3+	3	3+	3+	4+	2+	3	4-	4-	3	4-	4-	4+	2	3+	4
8	3+	3	2	3-	3-	2-	3-	3-	4	3-	2-	2+	2+	2-	3	3-
9	3+	3	1+	1+	3-	3+	2+	3-	4	3	2-	1	3	3	3-	2+
10	3-	3+	2+	3-	3-	2	1+	2-	3	3+	2+	2+	2+	1+	1-	1+
11	2+	2-	2	3-	3+	2	2+	3+	3-	1+	1+	3-	3	2+	2	3
12	2-	3-	3+	2+	2-	1+	1	2+	2+	3-	3-	3-	2-	1-	1+	1+
13	3-	2	1+	2+	2+	2-	3-	2+	3	2+	1+	2+	2	2	3-	3-
14	2+	2	3-	2	3	3	2+	3	2	2+	3	3-	4-	3	2+	3
15	2-	1-	1	1	2	1+	1+	2	1	0+	0+	1-	1	1-	1	1+
16	2+	2+	3-	2-	1+	1	1+	2+	2	2+	2+	2	1+	1-	1	3
17	1+	3-	2-	1	1	2-	2+	0+	2-	3	2+	1	0+	2-	2-	1-
18	0	0	1-	1	0+	0+	0+	0+	0	1-	0+	1+	1-	0+	0+	0
19	1	1	1-	2	1	2-	2-	1	1+	1-	1-	2	1-	2-	2-	0+
20	0	1-	0+	1	1-	0+	1-	0+	1-	1	0	1	1-	0+	0	0
21	0+	0+	1+	2+	2	2	1+	2	0	0+	1	2+	2+	2-	1-	1+
22	2+	3+	4	3+	3-	2+	3-	3-	2+	4-	4+	4-	2+	2+	3	3
23	3-	2	1+	1+	2-	2	1	2-	3	2+	2-	1	2-	1+	1	1+
24	1+	3	3-	3-	3	2+	3	3-	1+	3-	3	3+	4-	2+	4-	3-
25	1+	3-	2+	1+	2-	1+	2-	2	3-	3-	2-	1	2	2-	2-	3-
26	2	1+	2-	2-	2-	1+	1	2	2-	1+	2-	2	2-	2-	1	2-
27	3	3	2	1+	2	2-	2+	3-	3	3	3-	1+	1+	2	2+	3
28	3-	2+	3-	2-	1	2-	2+	3-	3	2+	2+	1+	2-	2-	2-	3-
29	1+	2	2-	3-	3-	4-	4-	4	2	2+	1+	3	3	4-	3+	4+
30	2	3	3	2	2	2-	2	1+	3-	3+	3+	2+	2+	1+	2-	1-

DAILY AVERAGE INDICES Ap

	1975								1976			
DAY	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR
1	6	24	12	9	7	6	7	32	4	23	17	107
2	16	28	6	7	6	2	36	27	4	20	32	16
3	19	12	7	5	3	11	65	12	15	16	27	44
4	14	11	6	6	3	9	41	13	10	12	12	30
5	34	12	5	29	4	6	22	8	9	8	15	27
6	35	11	6	7	13	25	11	7	13	8	33	30
7	22	6	12	5	7	38	10	4	11	21	26	27
8	14	4	37	14	6	45	7	18	5	29	42	14
9	16	5	35	15	24	37	37	16	4	24	36	16
10	19	4	17	15	26	24	20	8	47	24	32	12
11	2	14	18	7	26	8	13	5	40	12	27	12
12	3	27	5	4	19	12	9	3	13	17	26	9
13	6	14	10	5	17	7	4	3	9	22	11	13
14	14	8	13	16	13	9	3	6	11	17	14	15
15	3	13	15	18	8	5	4	9	7	8	15	4
16	28	17	12	5	6	10	6	14	10	6	18	8
17	14	12	14	9	13	8	17	9	14	14	20	5
18	7	12	15	6	14	4	7	6	9	22	13	2
19	15	12	9	4	8	3	8	6	8	25	11	5
20	23	6	6	15	7	5	9	3	11	19	8	2
21	12	9	6	17	6	6	18	9	20	14	5	5
22	11	5	6	12	4	6	50	10	23	14	3	19
23	8	4	6	10	4	7	8	7	20	4	5	8
24	5	3	6	6	2	4	13	2	21	3	4	16
25	14	4	33	9	3	4	15	18	10	4	4	9
26	18	5	19	5	14	5	14	34	5	9	138	6
27	10	4	11	6	14	5	5	31	6	26	35	11
28	5	4	10	5	8	9	9	15	5	20	15	10
29	11	26	4	27	5	12	29	15	6	34	15	17
30	6	22	5	14	2	9	36	11	9		12	10
31	4		5	6		19		7	29		10	
MEAN	13	11	12	10	10	12	18	12	13	16	22	17



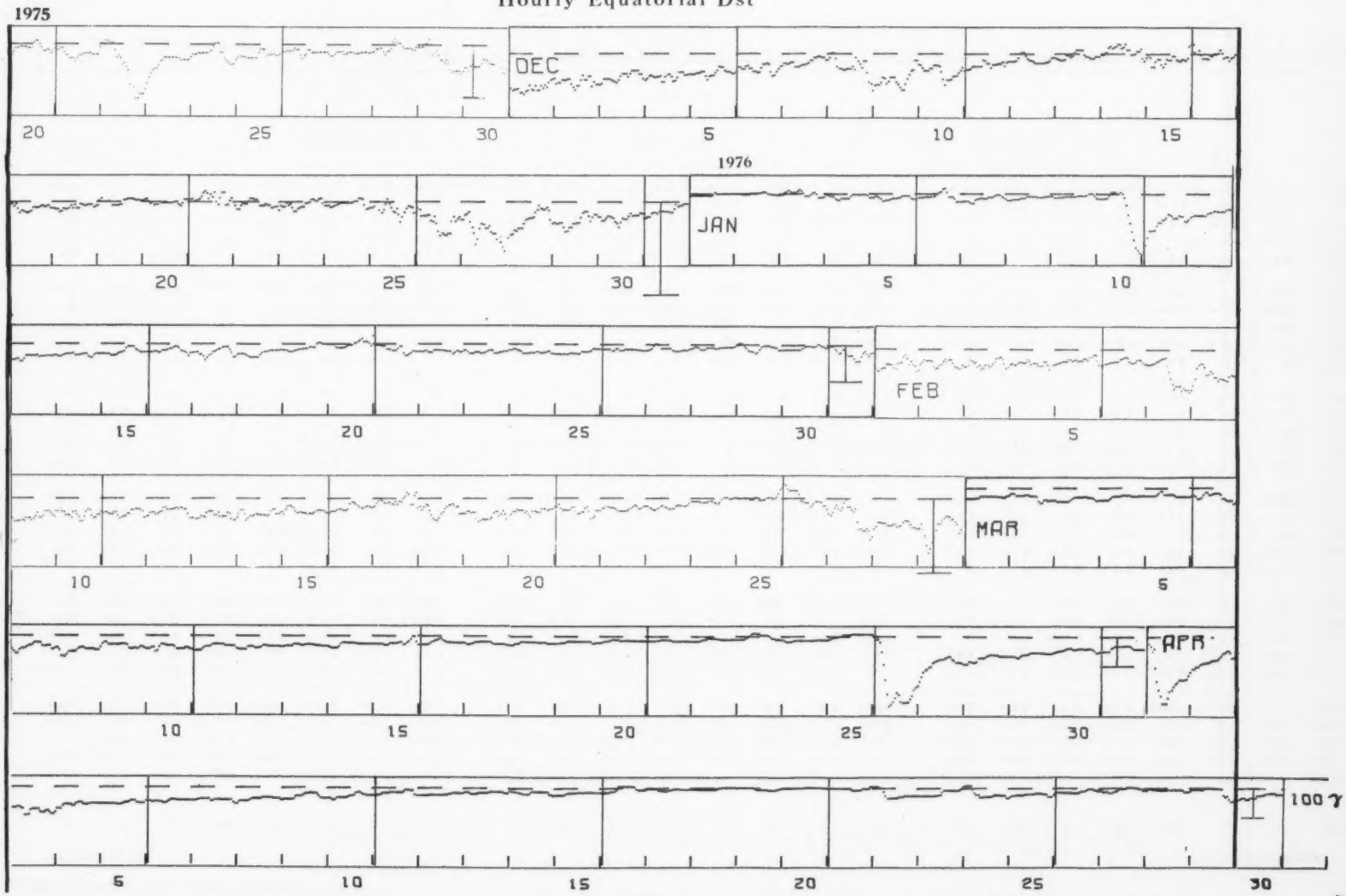
PLANETARY MAGNETIC
THREE-HOUR-RANGE INDICES
Kp (after Bartels)

Kp till 1976 April 30

Ks (from Wingst and Göttingen) till May 18

GEOMAGNETIC ACTIVITY INDICES

Hourly Equatorial Dst



Note the changes in sensitivity as well as the changing 0 reference level.

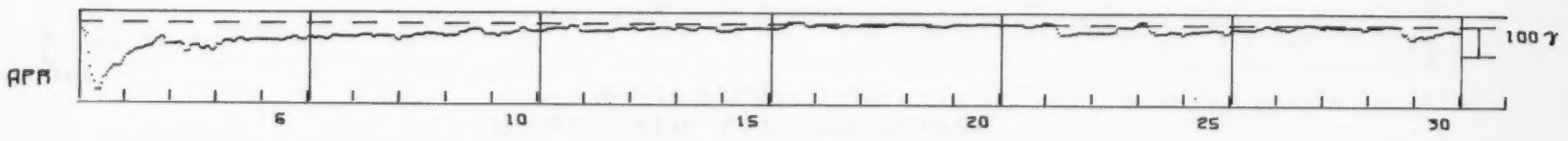
HOURLY EQUATORIAL Dst VALUES (PROVISIONAL)

APRIL 1976

NASA/GODDARD SPACE FLIGHT CENTER

(Time-UT) (Units-Gammas)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	-29	-36	-53	-38	-105	-149	-176	-195	-221	-214	-215	-195	-175	-170	-162	-151	-145	-138	-139	-137	-138	-134	-126	-113
2	-104	-101	-95	-94	-89	-85	-82	-81	-80	-79	-75	-73	-72	-71	-66	-60	-54	-49	-44	-43	-55	-72	-66	-69
3	-71	-71	-68	-63	-68	-74	-77	-96	-90	-89	-74	-70	-69	-72	-77	-36	-39	-86	-78	-75	-88	-93	-92	-81
4	-68	-68	-70	-61	-55	-58	-60	-60	-66	-60	-53	-49	-47	-55	-59	-62	-56	-53	-52	-52	-56	-54	-54	-54
5	-56	-53	-54	-58	-59	-55	-55	-58	-61	-61	-54	-52	-48	-49	-47	-43	-42	-46	-55	-53	-57	-52	-51	-43
6	-43	-45	-53	-52	-44	-49	-53	-52	-56	-52	-47	-43	-38	-40	-45	-47	-45	-42	-43	-41	-43	-42	-45	-47
7	-43	-40	-38	-36	-34	-36	-35	-37	-43	-48	-47	-39	-41	-44	-41	-42	-41	-40	-40	-39	-41	-53	-58	-53
8	-44	-42	-45	-44	-43	-41	-37	-34	-33	-38	-37	-35	-31	-30	-31	-31	-32	-34	-39	-38	-39	-39	-44	-42
9	-36	-37	-40	-36	-37	-34	-27	-25	-26	-28	-22	-18	-18	-17	-15	-23	-20	-24	-30	-37	-40	-35	-33	-34
10	-39	-42	-45	-37	-31	-33	-34	-32	-32	-30	-27	-24	-23	-22	-15	-12	-12	-22	-26	-23	-30	-25	-25	-26
11	-28	-24	-21	-20	-16	-15	-16	-16	-12	-12	-12	-15	-16	-18	-15	-11	-6	-5	-12	-13	-14	-27	-30	-25
12	-26	-27	-30	-29	-26	-21	-23	-25	-23	-25	-24	-21	-22	-23	-21	-19	-18	-15	-17	-16	-18	-22	-21	-14
13	-11	-17	-21	-25	-23	-20	-17	-14	-16	-16	-16	-15	-13	-10	-13	-12	-10	-10	-14	-16	-21	-22	-17	-9
14	-11	-14	-18	-19	-20	-22	-25	-22	-22	-18	-12	-9	-14	-16	-16	-15	-15	-17	-15	-18	-24	-28	-30	-27
15	-22	-21	-21	-21	-20	-16	-14	-15	-16	-15	-14	-13	-15	-15	-13	-12	-13	-12	-16	-16	-17	-18	-20	-20
16	-18	-16	-19	-15	-13	-10	-13	-9	-5	5	2	2	4	4	2	4	3	-1	-8	-11	-13	-10	-9	-5
17	-2	-5	-8	-7	-4	-7	-14	-13	-16	-16	-14	-10	-7	-6	-3	-3	-7	-10	-11	-11	-9	-8	-9	-6
18	-6	-9	-10	-9	-8	-7	-6	-6	-7	-9	-7	-5	-4	-1	1	1	2	2	-1	-1	-3	-4	-5	-6
19	-5	-4	-4	-2	0	-1	0	-1	-3	-9	-12	-11	-8	-7	-7	-11	-14	-13	-11	-12	-6	-4	-2	1
20	0	-2	-1	-1	0	-1	-1	-1	-1	-1	0	2	3	2	-2	-2	-1	-2	-3	-2	-3	-3	-6	-5
21	-4	-5	-6	-6	-7	-6	-3	-3	-3	-1	-2	-8	-11	-13	-12	-11	-9	-5	-1	-1	-2	-1	5	4
22	0	1	2	-6	-4	-17	-31	-38	-39	-31	-35	-35	-33	-28	-28	-27	-24	-23	-23	-27	-26	-26	-27	-31
23	-29	-29	-27	-26	-30	-30	-27	-26	-25	-23	-22	-20	-13	-7	-7	-10	-11	-9	-9	-8	-9	-6	-2	4
24	8	9	7	3	-8	-21	-27	-27	-34	-36	-27	-27	-29	-31	-27	-24	-21	-25	-29	-30	-29	-30	-38	-35
25	-27	-23	-23	-21	-23	-29	-24	-20	-19	-19	-18	-20	-18	-17	-16	-16	-18	-24	-23	-25	-33	-31	-28	-21
26	-14	-13	-16	-17	-18	-16	-15	-16	-17	-18	-16	-16	-14	-9	-8	-8	-6	-2	-4	-8	-11	-13	-15	-15
27	-16	-19	-11	-10	-21	-18	-14	-11	-9	-6	-2	-3	-1	-1	2	0	2	1	-4	-5	-8	-8	-13	-14
28	-10	-2	-8	-11	-10	-7	-9	-13	-10	-12	-8	-5	-6	-5	-11	-12	-6	-6	-8	-13	-19	-19	-15	-10
29	-5	-6	-9	-10	-11	-11	-9	-2	1	1	-1	-5	-5	-7	-4	-1	-9	-28	-33	-25	-41	-48	-48	-49
30	-37	-33	-31	-30	-42	-40	-32	-30	-31	-31	-23	-22	-21	-22	-19	-16	-17	-15	-17	-22	-25	-24	-23	-19



PRINCIPAL MAGNETIC STORMS

APRIL 1976

OBS. 2 letter IAGA code	GEOMAG-NETIC LATI-TUDE	COMMENCEMENT DAY	hr min (UT)	TYPE	SC - AMPLITUDES D(')	H(γ)	Z(γ)	MAXIMUM 3 HOUR - INDEX K DAY(3 HOUR PERIOD)	K	RANGES D(')	H(γ)	Z(γ)	UT END DAY	HOUR
CO	64.6N	1	01--	..	..	..	..	01(2,4)	8	632	2580	1840	02	09
SI	60.0N	1	0254	SC*	-20.1*	+240	+53.4	1(4)	9	--	--	--	01	18
WI	54.2N	1	0035	..	..	..	..	01(2)	7	40	455	250	02	05
FR	49.6N	1	01--	..	..	..	..	01(3)	8	57	295	425	02	07
BD	48.9N	1	01--	..	..	..	..	01(4)	7	60	298	274	01	18
TU	40.4N	1	00--	..	..	..	..	01(2,3,4)	6	23	160	65	01	16
SJ	29.9N	1	0254	SC	+01	+34	+10	01(2)	6	12	149	28	02	07
HO	21.1N	1	01--	..	..	..	..	01(2)	7	13	231	43	01	18
JP	17.3N	1	0254	SC	- 0.9	32	- 8	--	-	6	342	30	01	15
UJ	13.5N	1	0254	SC	..	30	- 8	--	-	6	364	30	01	15
AL	09.5N	1	0254	SC	- 0.7	36	- 5	01(2)	8	5	353	39	01	15
HD	07.6N	1	0254	SC	- 0.1	+37	- 3	01(4)	9	7	352	47	02	09
GU	04.0N	1	0255	SC*	..	36	-10	01(2)	8	10	330	50	01	15
AN	01.5N	1	0254	SC	- 1.4	53	16	--	-	5	367	117	01	15
HU	00.6S	1	0254	SC	1	51	9	01(2,3,4,5,6)	6	12	179	44	01	23
TV	01.1S	1	0254	SC	..	..	..	--	-	5	365	174	01	15
AP	16.0S	1	0255	SC	+ 1	+ 8	- 4	01(2)	7	4	192	42	02	09
PM	18.6S	1	01--	..	..	..	..	01(4)	6	12	320	130	08	16
HR	33.7S	1	00--	..	..	..	..	01(2,3)	7	46	346	197	08	06
GN	43.2S	1	01--	..	..	..	..	01(4)	9	48	250	290	08	15
TO	46.7S	1	0254	SC	+ 2.4	-35	+ 2	01(4)	8	66	240	200	01	21
KG	56.5S	1	00--	..	..	..	..	01(2,3,4)	8	--	--	--	02	10
CO	64.6N	2	17--	..	..	..	..	03(5,6) 04(4) 07(5)	7	310	1690	870	08	02
NE	55.1N	2	17--	..	..	..	..	03(2) 06(2)	6	40	179	198	10	16
WI	54.2N	2	18--	..	..	..	..	03(8)	6	32	180	95	04	18
TU	40.4N	2	17--	..	..	..	..	03(2,3,8) 04(1,2,3) 05(2) 06(2)	5	12	140	40	08	11
HO	21.1N	2	17--	..	..	..	..	04(1)	5	11	81	40	--	--
JP	17.3N	2	1700	..	..	..	..	--	-	5	93	30	05	00
SH	14.6N	2	1700	..	..	..	..	--	-	6	86	35	05	00
UJ	13.5N	2	1700	..	..	..	..	--	-	5	94	28	05	00
AL	09.5N	2	1700	..	..	..	..	03(2,5,7)	5	5	111	35	05	00
HD	07.6N	2	1747	SC	- 0.1	+ 8	- 1	03(6,7)	5	4	121	27	05	01
GU	04.0N	2	1748					03(3)	5	10	110	40	04	18
TV	01.1S	2	1700	..	..	..	..	--	-	4	172	84	05	00
TO	46.7S	3	14--	..	..	..	..	03(5,8) 04(1,4,5)	5	24	140	50	04	18
KG	56.5S	3	15--	..	..	..	..	03(8)	8	--	--	--	05	01
HD	07.6N	7	0300	..	..	..	..	07(5)	5	4	91	21	08	02
HD	07.6N	21	2211	SC	0.0	+12	- 1	22(2)	4	4	112	25	23	02
NE	55.1N	22	0052	SC	1	9	..	22(3)	5	21	80	128	23	09
CO	64.6N	22	0208	SC*	+ 2	-14	..	22(3,4)	6	94	800	370	22	14
JP	17.3N	29	0700	..	..	..	..	--	-	7	86	29	30	11
SH	14.6N	29	0700	..	..	..	..	--	-	5	79	26	30	11
UJ	13.5N	29	0700	..	..	..	..	--	-	6	98	30	30	11
AL	09.5N	29	0700	..	..	..	..	29(6)	5	6	106	35	30	11
HD	07.6N	29	0705	SC	- 0.3	+10	- 1	29(6)	5	5	113	25	30	20
AN	01.5N	29	0700	..	..	..	..	--	-	4	132	48	30	11
TV	01.1S	29	0700	..	..	..	..	--	-	3	159	68	30	11
HR	33.7S	29	15--	..	..	..	..	29(6,8)	5	8	62	62	29	24

SUDDEN COMMENCEMENTS AND SOLAR FLARE EFFECTS

APRIL 1976

PRELIMINARY REPORT ON RAPID MAGNETIC VARIATIONS (by Dr. A. Romana)
The meaning of the station symbols is given in the IAGA-Bulletins nr. 32. Times of ssc are mean values.

Sudden commencements followed by a magnetic storm or a period of storminess (ssc)

01 0255 A: DB FU AQ IK EB CI AE HU LM; B: WN WI NI VI MT KA KY TO CZ
(si: A: GN; B: TL)

Solar-flare effects (sfe)
Effects confirmed by ionospheric or solar observations are underlined.

08 1231 - 1241 LG
17 1432 - 1441 LG
25 1440 - 1450 LG
30 2102 - 2130 HU

RADIO PROPAGATION QUALITY FIGURES AND FORECASTS

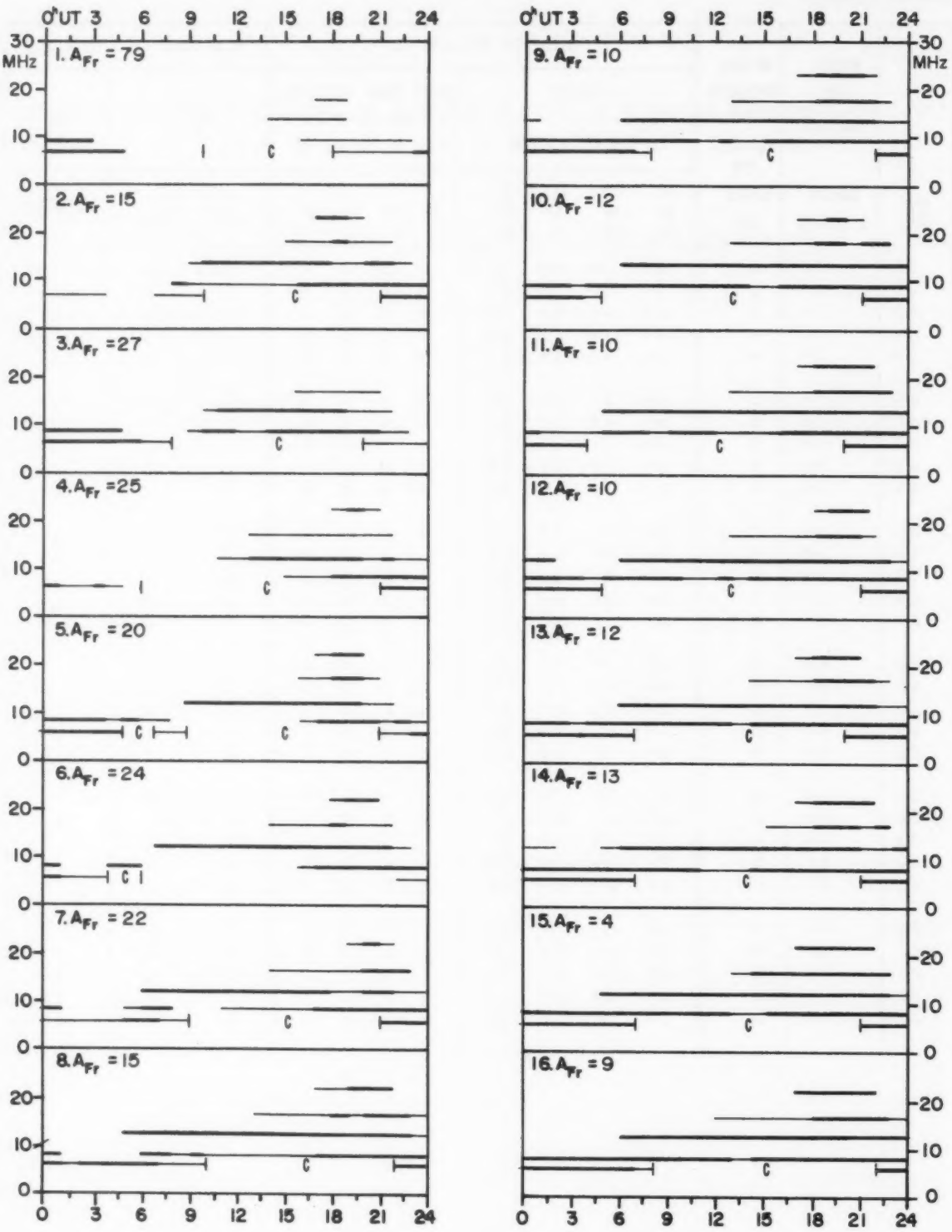
APRIL 1976

North Atlantic

APR 1976	WHOLE DAY INDICES NORTH ATLANTIC	ADVANCE FORECASTS (JC-REPORTS) FOR WHOLE DAY	NORTH ATLANTIC								GEOMAGNETIC INDICES		
			6-HOURLY QUALITY FIGURES				SHORT-TERM FORECASTS ISSUED ABOUT ONE HOUR IN ADVANCE OF				K_{FR}		A_{FR}
			00 TO 06	06 TO 12	12 TO 18	18 TO 24	02	08	14	20	HALF DAY (1)	HALF DAY (2)	OBSERVED
01	3+	6	5-	2-	4-	3+	5	5	4	4	(7)	3	79
02	4+	6	3o	5o	5+	5-	4	3	5	4	3	2	15
03	5-	5	5+	4-	6-	5o	5	5	6	5	(4)	(4)	27
04	4+	4	4+	3+	5-	5o	5	5	5	5	(4)	3	25
05	5o	4	6-	4o	5+	5+	5	5	5	5	(4)	3	20
06	5-	5	4+	5o	5o	5-	5	4	4	5	(4)	(4)	24
07	5o	5	5o	4+	5+	5+	4	4	5	4	(4)	3	22
08	5+	5	5+	4+	6o	6+	4	5	5	5	3	2	15
09	5+	5	6-	3+	6+	6+	5	4	6	6	3	2	10
10	5+	6	6-	4+	6o	6o	6	5	6	6	3	2	12
11	6-	6	5+	5-	7-	6-	6	5	6	6	2	2	10
12	5+	6	5+	4o	6+	6+	6	5	6	6	3	1	10
13	6-	5	6o	5+	6-	6o	6	5	6	6	3	2	12
14	6-	5	6-	5o	6-	6+	6	6	6	6	3	3	13
15	6-	6	6-	5o	6+	6+	5	6	6	6	1	2	4
16	6o	6	6o	5+	7-	7-	5	5	6	6	3	2	9
17	6+	6	6+	6-	7-	6+	6	5	6	6	2	1	6
18	6+	6	6o	6-	6+	7-	6	5	6	6	1	1	2
19	6+	6	6+	6o	6+	7-	6	6	6	7	2	1	4
20	6+	6	6+	6o	6+	6+	6	6	6	7	1	0	1
21	6+	6	6-	6o	7-	6o	6	6	6	6	1	1	4
22	6o	5	6o	5+	6o	6+	6	4	6	5	(4)	3	16
23	6+	4	6o	6o	7-	6+	5	5	5	6	2	2	8
24	6o	4	7-	6-	6o	6o	6	5	5	5	3	3	13
25	6o	5	6o	6o	6-	6-	6	5	6	6	2	2	8
26	6-	6	6o	6-	6-	6+	6	5	5	6	2	1	6
27	6o	6	6-	6-	6+	6+	6	5	6	6	3	2	13
28	6+	4	6+	6-	7o	7-	5	5	6	6	3	2	12
29	6o	5	6+	5o	6+	6o	6	6	6	5	3	3	13
30	6o	5	6o	5+	6+	6o	5	5	5	5	3	2	10

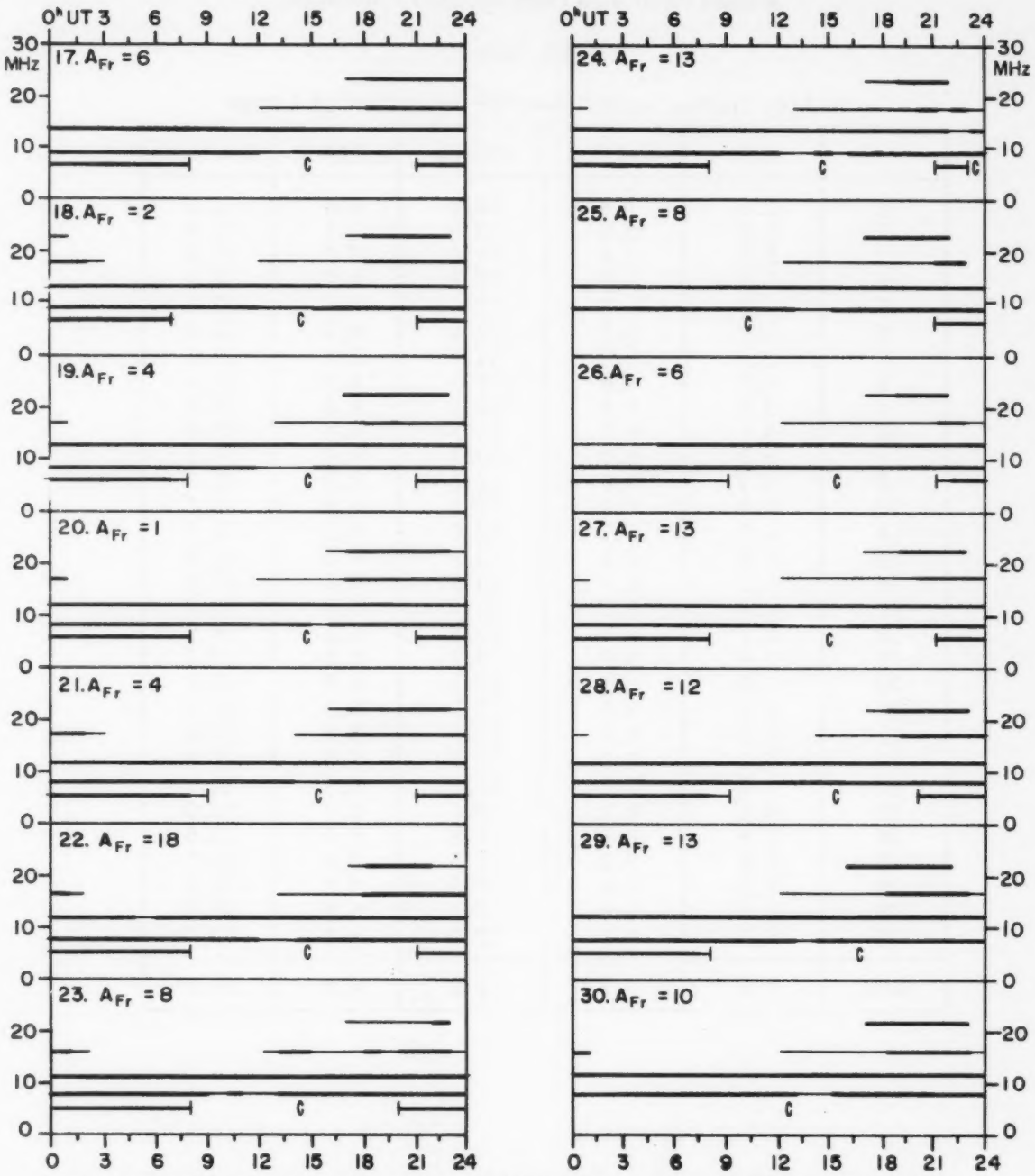
TRANSMISSION FREQUENCY RANGES -- NORTH ATLANTIC PATH

APRIL, 1976



TRANSMISSION FREQUENCY RANGES -- NORTH ATLANTIC PATH

APRIL 1976



Field strengths from five frequencies, 6.425, 8.542, 12.813, 17.084 and 22.378 MHz, observed on a Lüchow - Halifax circuit are represented above. Heavy solid lines represent field strengths ≥-12 dB above 1 μv/m (transmitter power reduced to 1 kW). Observed field strengths between -12 dB above 1 μv/m and -40 dB above 1 μv/m are represented by the fine line.

Adapted from Observations by Deutsche Bundespost

RADIO PROPAGATION QUALITY INDICES

APRIL 1976

Quality Indices calculated for reception at Lüchow

	TOKYO	HALIFAX	MOSCOW	CANBERRA	BRACKWELL
1	2.6	1.4	10.5	3.5	11.5
2	5.0	5.0	13.8	3.5	13.6
3	2.5	3.6	11.8	3.3	12.5
4	3.2	4.9	12.5	4.2	12.4
5	3.5	4.9	12.4	4.1	12.2
6	3.6	5.7	11.6	4.3	11.9
7	3.7	6.8	11.7	3.9	12.7
8	4.2	7.6	12.1	4.0	13.4
9	3.6	6.5	12.9	4.6	12.8
10	4.1	6.6	12.5	4.6	13.0
11	5.5	8.0	12.4	4.7	13.1
12	3.9	7.6	12.0	4.3	13.3
13	4.4	7.6	12.6	4.5	12.7
14	4.7	7.3	13.7	4.8	12.3
15	6.9	8.2	13.4	4.3	13.2
16	6.3	8.8	13.5	4.6	13.5
17	7.4	8.5	13.5	5.6	13.9
18	7.7	8.4	13.6	5.6	14.0
19	7.4	8.3	13.3	5.6	13.7
20	7.0	8.5	13.3	6.2	13.1
21	6.4	8.6	13.2	5.9	13.3
22	6.0	8.2	13.4	5.8	12.8
23	6.1	8.3	13.5	5.8	12.5
24	4.0	7.4	13.2	5.2	12.9
25	4.8	8.2	13.1	5.3	13.0
26	5.6	8.7	12.8	5.4	13.5
27	5.2	9.0	13.5	5.4	13.2
28	6.1	8.6	13.2	5.2	12.9
29	5.4	8.6	12.9	5.4	13.2
30	4.7	8.1	12.3	5.1	13.0
MEAN	5.0	7.3	12.8	4.8	13.0

USCOMM–NOAA–ASHEVILLE–6-30-76–950

AMERICAN REVOLUTION BICENTENNIAL
1776-1976